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# McGraw-Hill Economics

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## 31st ANNUAL McGRAW-HILL FALL SURVEY OF PRELIMINARY PLANS FOR NEW PLANTS & EQUIPMENT, 1984-86

The 1984 capital investment rebound has been terrific. Expenditures for new plant and equipment in the U.S. will be up some 15%-16% from 1983; and with capital goods inflation low, "real" expenditures will be up almost as much. So much for the great news.

In 1985, U.S. business plans to raise domestic plant and equipment spending 9.8% to about $386 billion (Table I).* That's hardly bad news. But at the same time, companies think plant and equipment prices will jump 5.3% next year (Table II), converting that planned spending increase to just 4.3% after inflation.

These are key findings of McGraw-Hill's "31st Annual Survey of Preliminary Plans for New Plants and Equipment, 1984-86." Conducted in September and October, the survey drew responses from more than 550 companies that account for 28% of total capital spending in the U.S. (Table X). Dollar figures in this report refer to domestic capital spending by all U.S. firms, not just spending by respondents.

The survey was more glum about 1986--firms projected a decline in outlays of nearly 2% (Table I). Survey projections for more that one year ahead are subject to much change, and usually undershoot the mark. Nonetheless, the 1986 projection is unusually low, and may thus give pause for thought.

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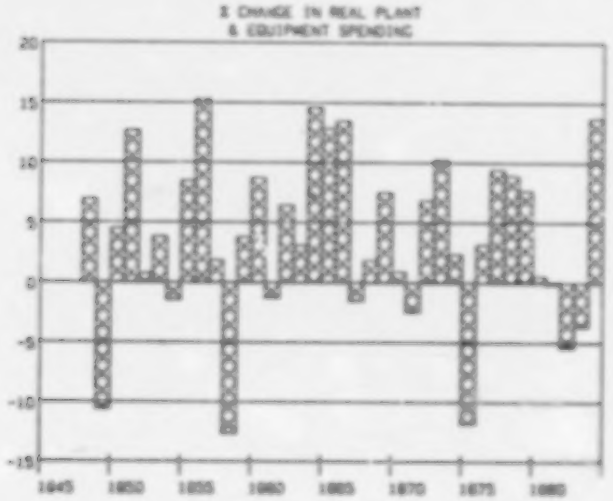
*Tables denoted by Roman numerals appear at the back of this report.

1985: Neither Brickbats Nor Roses

With capital investment growth so spectacular in 1984, it would be hard to match it in 1985. Nonetheless, the survey's 1985 projection of only 4+% after inflation must rate as disappointing: For as shown in Chart I, the near-record investment growth of 1984 followed upon the worst four-year period of capital spending in modern history. The implication: Further vigorous growth is needed in 1985 to get the nation's capital stock in shape.

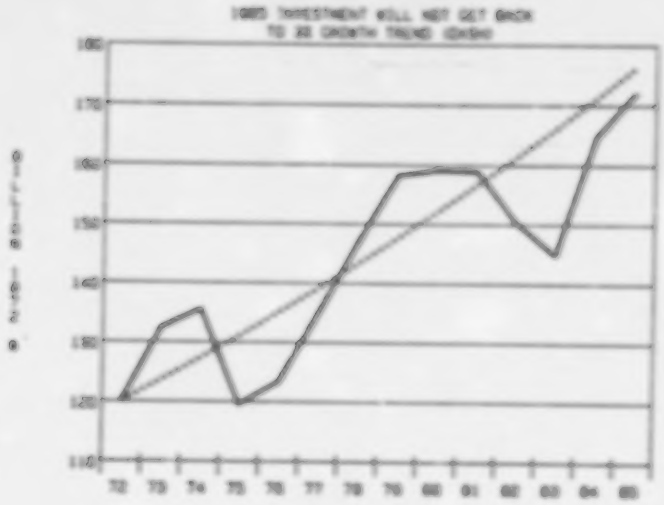
Chart I




Yet as shown in Chart II, a 4+% gain in inflation-adjusted capital spending next year will not lift investment back to its long-run trend of 3% growth. (If the survey projection is accurate, average annual investment growth from 1979 to 1985 would be only 1.4%.) What's needed to get back to trend next year is a real advance of about 7%.

Furthermore, the chart suggests that by 1985--the third year of an economic expansion--investment should be at or above its trend growth line. For if 1985 witnesses a decline in plant and equipment spending, as the survey suggests, then investment would not re-attain its trend during the current business upturn.

Chart II



A potential silver lining here is that the McGraw-Hill fall survey tends to under predict investment growth. On average, the survey understates growth in the following year by some 4%, as shown in Table 1 (next page). If the current survey is typical, therefore, capital spending would grow about 14% next year rather than 9.8%. And inflation-adjusted growth could be some 9%-10%.

But, importantly, in addition to its average behavior the survey also behaves differently at different stages of the business cycle. Specifically, the survey under predicts during strong investment periods and over predicts when the economy and investment slump. This pattern can be detected in Table 1, but is probably made more clear by Chart III.

Chart III

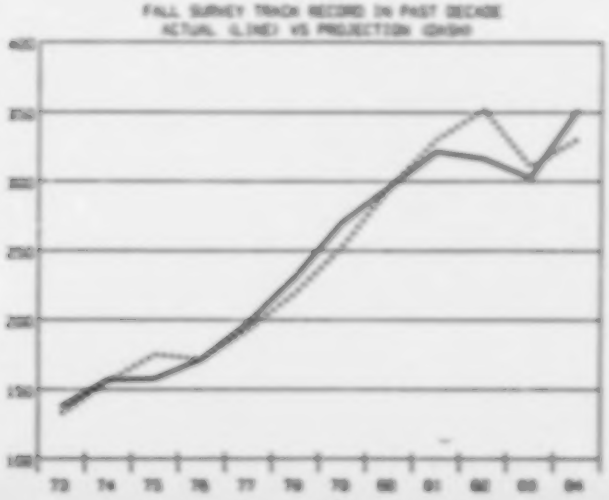


Table 1. The Survey Undershoots by 4% on Average

| | Billion Dollars | | | |
|---|---|---|---|---|
| | Actual Spending | Survey Projection | Actual Minus Projection | % Error |
| 1955 | $36.6 | $31.5 | $5.1 | 13.9% |
| 1956 | 44.8 | 41.3 | 3.5 | 7.8 |
| 1957 | 48.1 | 49.5 | -1.4 | -3.0 |
| 1958 | 42.2 | 44.9 | -2.7 | -6.4 |
| 1959 | 44.8 | 42.4 | 2.3 | 5.2 |
| 1960 | 48.6 | 49.2 | -0.5 | -1.1 |
| 1961 | 47.8 | 47.3 | 0.5 | 1.1 |
| 1962 | 51.3 | 49.7 | 1.6 | 3.1 |
| 1963 | 53.3 | 52.6 | 0.7 | 1.3 |
| 1964 | 61.7 | 55.3 | 6.3 | 10.2 |
| 1965 | 70.4 | 64.5 | 5.9 | 8.4 |
| 1966 | 82.2 | 75.6 | 6.6 | 8.0 |
| 1967 | 83.4 | 86.0 | -2.6 | -3.1 |
| 1968 | 88.4 | 87.5 | 0.9 | 1.0 |
| 1969 | 99.5 | 95.1 | 4.4 | 4.4 |
| 1970 | 105.6 | 107.6 | -2.0 | -1.9 |
| 1971 | 108.5 | 108.1 | 0.4 | 0.4 |
| 1972 | 120.2 | 115.8 | 4.4 | 3.7 |
| 1973 | 137.7 | 132.6 | 5.1 | 3.7 |
| 1974 | 157.0 | 156.1 | 0.9 | 0.5 |
| 1975 | 157.7 | 175.0 | -17.3 | -11.0 |
| 1976 | 171.4 | 171.8 | -0.3 | -0.2 |
| 1977 | 198.1 | 193.3 | 4.8 | 2.4 |
| 1978 | 231.2 | 219.6 | 11.6 | 5.0 |
| 1979 | 270.4 | 253.1 | 17.3 | 6.4 |
| 1980 | 295.6 | 295.4 | 0.2 | 0.1 |
| 1981 | 321.5 | 330.7 | -9.2 | -2.9 |
| 1982 | 316.4 | 352.1 | -35.7 | -11.3 |
| 1983 | 302.5 | 310.7 | -8.2 | -2.7 |
| Average Absolute Error | | | | 4.4 |

Note in the chart that in 1973, a strong year for capital investment, the survey shot too low. When the economy weakened in 1974, the survey projection was right on target, but then it overshot by a mile in 1975, a year of general economic as well as investment contraction. A similar pattern emerges in the late 1970s and early 1980s: The survey undershot in strong years, missed signficantly when the economy slumped, and predicted very accurately when the economy waffled.

This history suggests, therefore, that to gauge the accuracy of the current survey requires an estimate of the economy's underlying strength. Here are three possibilities, keeping in mind that inflation-adjusted gross national product rose only 2.7% at an annual rate in the third quarter:

1) Recent evidence of an economic slowdown presages a recession in 1985. In this case, the survey would overshoot significantly. (See the record for 1975 and 1982 in Table 1.)

2) The economy avoids a recession, but the rate of growth continues to sag. The survey would probably overshoot by perhaps a couple of percentage points.

3) The recent slowdown marks the end of rapid economic growth but does not mark the beginning of a period of weakness. The economy, that is grows at a modest pace. In this case, the survey should be on target.

4) The recent slowdown in growth proves only a glitch, and the economy perks up from now on. The survey would then be too pessimistic for 1985.

The sales expectations of survey respondents (Tables III and IV) are in line with case 3) above. After inflation, manufacturers anticipate their sales to rise 4.4% in 1985, a decent but not outstanding growth rate.

The risk to 1985, however, seems on the downside. During the summer, consumers showed that their deep pockets do have limits; problems appeared in nonresidential construction; business inventories may have gotten a bit too high relative to sales; and housing has trended down through most of the year. If these straws in the wind take on some weight, companies' 1985 sales forecasts would fall apart and capital budgets would get pared.

Developing iffiness in capital spending is suggested, though perhaps just barely, in Table 2. For example, in 1984's third quarter, new orders for nondefense capital goods dipped; and the office vacancy rate continued to climb while the manufacturing operating rate started to fall.

## Table 2. Recent Capital Spending Indicators

### Short-Term Equipment Capital Spending Indicators
(Billions of dollars, annual rate, SA)

| | Quarters | | | | | Months | | | Years | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 83:III | 83:IV | 84:I | 84:II | 84:III | Jul 84 | Aug 84 | Sep 84 | 1982 | 1983 |
| New Orders--Nondefense Capital Goods | 281.0 | 300.3 | 315.9 | 331.5 | 325.0 | 331.8 | 318.0 | 325.2 | 247.6 | 272.7 |
| In 1972$ | 116.5 | 124.1 | 129.5 | 134.6 | 131.3 | 134.3 | 128.3 | 131.2 | 105.9 | 113.4 |
| Shipments--Nondefense Capital Goods | 274.3 | 290.8 | 293.9 | 310.3 | 317.5 | 310.3 | 312.6 | 329.5 | 271.0 | 271.9 |
| In 1972$ | 113.7 | 120.2 | 120.5 | 126.0 | 128.2 | 125.6 | 126.1 | 132.9 | 115.9 | 113.1 |
| Business Equipment Output, 1972$ | 95.6 | 101.2 | 106.5 | 108.8 | 117.0 | 115.7 | 118.2 | 117.1 | 97.4 | 94.0 |

### Short-Term Construction Capital Spending Indicators
(Billions of dollars, annual rate, SA)

| | Quarters | | | | | Months | | | Years | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 83:II | 83:III | 83:IV | 84:I | 84:II | Jun 84 | Jul 84 | Aug 84 | 1982 | 1983 |
| Industrial Construction | 13.0 | 13.1 | 11.4 | 13.7 | 14.3 | 14.1 | 13.6 | 14.3 | 17.4 | 12.9 |
| In 1972 $ | 5.7 | 5.6 | 4.9 | 5.8 | 6.0 | 5.9 | 5.7 | 6.0 | 7.6 | 5.6 |
| Manufacturing Operating Rate (%) | 72.9 | 76.3 | 77.6 | 79.4 | 80.3 | 80.8 | 81.4 | 81.2 | 70.5 | 74.2 |
| Office Construction | 19.9 | 20.9 | 21.3 | 23.7 | 25.9 | 25.9 | 25.9 | 25.9 | 23.0 | 20.8 |
| In 1972 $ | 8.7 | 9.0 | 9.1 | 10.0 | 10.8 | 10.9 | 10.9 | 10.8 | 10.1 | 9.0 |
| Office Vacancy Rate (%)* | 11.7 | 11.7 | 12.4 | 13.1 | 13.5 | NA | NA | NA | 8.0 | 11.7 |
| Private Building Construction | 58.1 | 61.3 | 61.1 | 69.5 | 76.4 | 76.3 | 74.9 | 76.0 | 65.2 | 60.3 |
| In 1972 $ | 25.4 | 26.5 | 26.2 | 29.4 | 31.9 | 32.1 | 31.4 | 31.8 | 28.6 | 26.1 |
| Nonresidential Construction Contracts** | 60.8 | 63.4 | 66.8 | 67.4 | 73.7 | 71.0 | 77.4 | 73.7 | 56.0 | 61.7 |

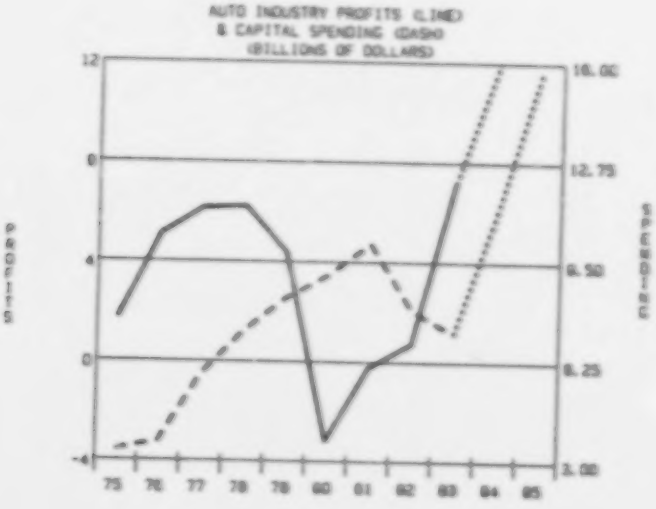
Autos Still Giving It the Gas

Though the overall capital spending outlook may be getting a bit cloudy, for makers of motor vehicles and parts the road ahead is perfectly clear. In 1985, this industry plans to boost capital outlays 41%--on top of an estimated 55% surge in 1984.

Despite the size of this planned 1985 increase, the projection is believable, for at least two reasons. One is that the investment projection is based on a very modest sales forecast of about 2% growth. Hence motor vehicle makers' plans are not being driven primarily by expectations that more capacity will be needed. Rather, plans are being driven by the need to raise productivity and lower costs in order to compete against imports. And with import quotas scheduled to come off this spring, auto makers want to be ready; at the least, they want to make it clear they are wisely using this period of protection to modernize.

Besides helping to meet foreign competition, investment in modernization has already paid off by helping a scaled-down auto industry chalk up record profits. Which is the second reason underpinning the credibility of auto makers' investment plans: They've got the internal resources to finance major capital projects.

Chart IV



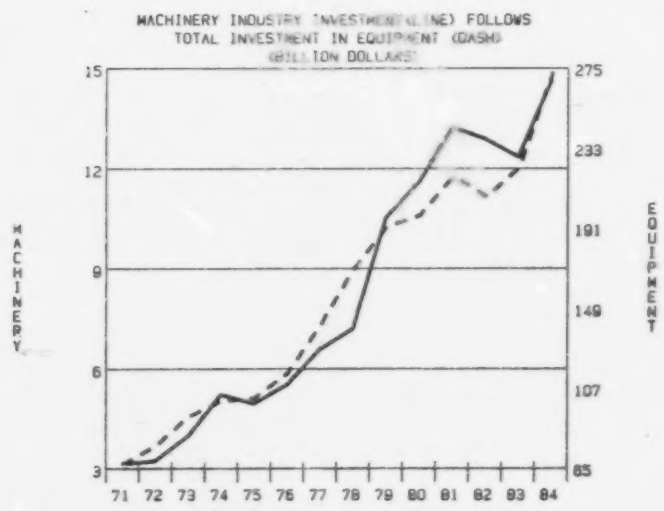
Note in Chart IV that industry capital spending follows behind industry profits. So with profits soaring in 1983 and 1984, 1985 should witness big capital outlays.

Beside autos, producers of some other types of durable goods are also sporting hefty 1985 capital budgets. Iron and steel manufacturers, enjoying their first profitable year since 1981, plan a huge 38% hike in new plant and equipment outlays. Like auto makers, steel producers are also investing under the impetus of fierce foreign competition, and may be anticipating a major burst of modernization investment in exchange for further government import controls.

One caveat, however, on the steel projection: In last year's survey, iron and steel respondents projected a large capital spending increase for 1984 that did not materialize. Perhaps a slackening order pace crimped capital budgets, shifting many projects to 1985. If that is the case, unless the economy snaps back with vigor, steel spending could come in far lower than now planned.

Perhaps a more stable projection for 1985 is that of non-electrical machinery, where capital outlays are slated to jump 23%. More stable because

Chart V



machinery makers, which include computer manufacturers, have been the prime beneficiaries of the 1984 capital spending boom. Chart V illustrates this connection, suggesting that once purchases of capital equipment pick up, investment by makers of capital equipment picks up.

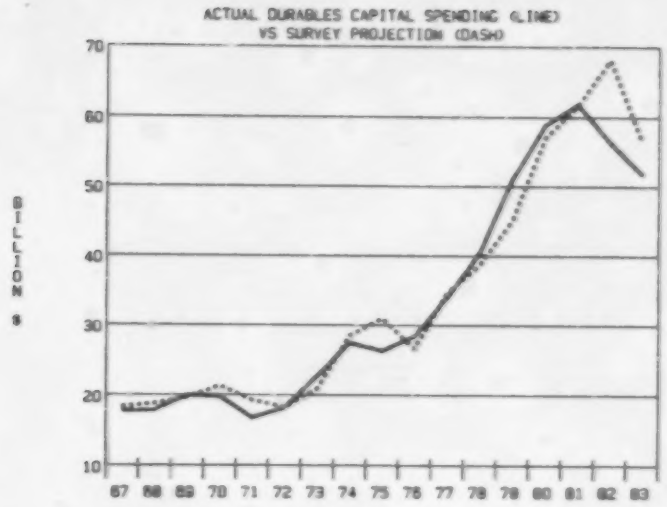
It's true that the recent burst of capital goods purchases includes a slew of imports. Nontheless, orders for domestic machinery are running 25% ahead of a year ago. Industry profits and operating rates are also on the rise; so even if machinery sales start to tail off, plans for expansion, modernization, and replacement should go forth next year.

One survey result within durables that appears surprisingly strong is the 17.6% spending increase now budgeted by the stone, clay, and glass industry. Surprisingly strong because both residential and nonresidential construction have crumbled of late. Housing, in particular, has been quaking on its foundations, although recent declines in interest rates may shore the market up.

Nonresidential construction, meanwhile, may grow only slowly from now on after booming in the first half of 1984. One looming problem: An overhang of office space on the market. Other developing problems: The impact of Medicare's cost containment program on hospital construction and the impact of the housing slowdown on store, warehouse, and shopping center construction. In short, the survey's stone, clay, glass projection looks too bullish.

If the economy weakens next year, the survey's projection for durables in general will be too bullish, as indicated by Chart VI.

Chart VI




Nondurables: Looking for a Repeat of '84

While the durables sector is expecting a little slower growth in plant and equipment spending next year compared to this year, nondurables makers expect growth in both years to be about the same--11.9% in 1984 versus 12.7% in 1985.

That's in the aggregate, however. Among industries there will be some changes.

The textile industry, after raising capital expenditures for two years in a row, and in five out of the last seven years, now intends to cut outlays in 1985 by 6.7%. This result appears somewhat mysterious given that the textile operating rate is among the highest of all industries. Yet though high, the operating rate has been declining for the past year, as shown in Chart VII, and this trend may be driving investment down.

Another result that seems to ask for clarification is in petroleum, which projects a 13.9% boost in plant and equipment outlays next year. As

Chart VII

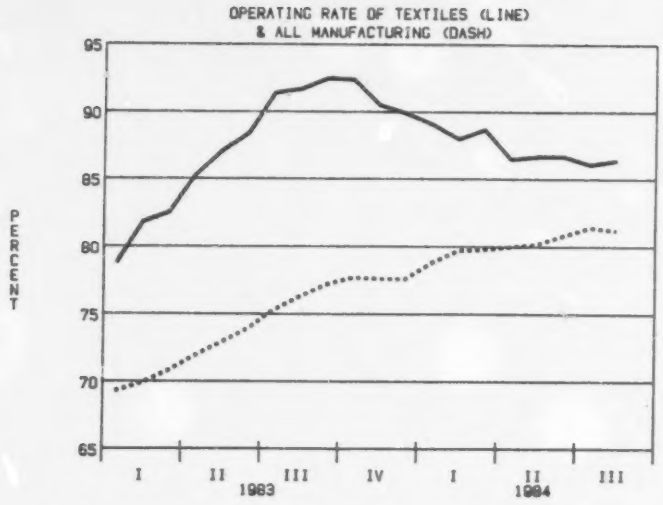



Table V at the back of this report indicates, essentially all of the increase is planned in exploration and production. (Note that the exploration and production figure in Table V includes independent oil and gas well drillers--classified as mining companies in Table I--as well as integrated oil companies, the group under discussion at present.)

Yet with oil prices not doing much for most of 1984, and then weakening in the fall, what incentive is driving such a pickup in oil and gas exploration and production? In part, the answer may be that cuts in crude oil prices by several major producing countries came too recently to be reflected in intentions reported by survey respondents.

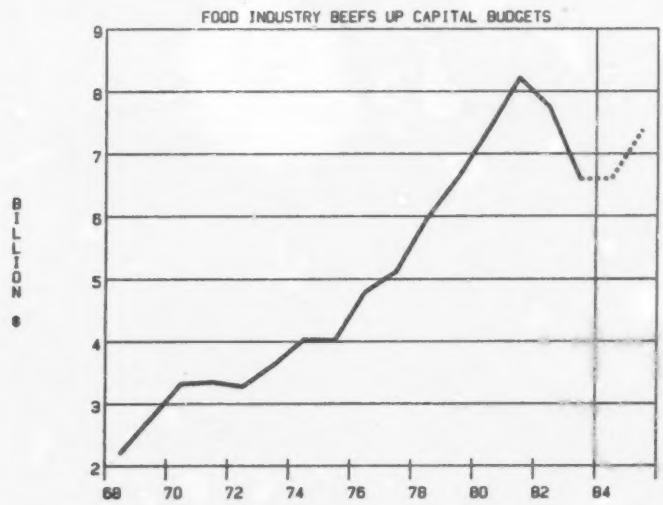
Another possibility is that, judging by Table V, no sector of the oil business besides drilling offers any investment attraction at all. Hence most funds available for capital spending may have been put into exploration and production. Which means these plans could be on the soft side. Supporting the suspicion of softness is the fact that a number of respondents to the survey said they didn't know at the moment what their 1985 investment plans would be. If these firms were waiting for a clearer signal on oil prices,

that signal may now be in, and it points to less drilling than reported in the survey. At the same time, the costs of drilling a well have tumbled more than oil prices in the past couple of years, which should be providing incentive to explore.

Interestingly, however, independent drillers--listed under "Oil & Gas Extraction" in Table IX--intend to cut exploration and production next year. Their plans may reflect uncertainty not only about market developments, but about financing as well.

Within the entire nondurables sector, food companies plan the biggest increase in capital spending--up 17%, with all sectors of the industry intending to raise spending (see Table IX). While the projected increase is large, it should be put into the context of sharp investment cuts in recent years, as shown in Chart VIII.

Chart VIII

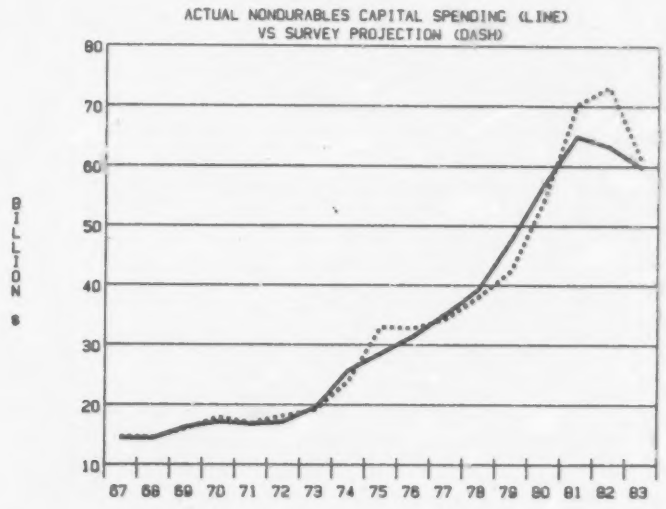



Elsewhere in the nondurables sector, paper, rubber and plastics, and other nondurables all expect to hike plant and equipment expenditures next year about 10%. Chemical companies anticipate a 13% rise, with industrial chemicals, soaps and toiletries, and miscellaneous chemicals providing all the

clout (see Table IX). By contrast, investment in drugs, paints, and agricultural chemicals is slated to decline.

The survey's track record in projecting capital spending by nondurable goods producers is illustrated in Chart IX. Nondurables manufacturers' spending plans typically are less volatile than those of durables makers. But if crude oil prices slide very much, cuts in petroleum spending could significantly afffect the overall results for 1985.

Chart IX




Nonmanufacturing: Airlines Up, Electric Utilities Power Down

As a group, nonmanufacturing industries project the smallest advance in capital outlays next year--up 6.2%. This relatively weak number heavily reflects an anticipated 4% cutback by electric utilities. But the number is also pulled down by the huge trade and services sector, which projects a 5.3% rise in 1985 spending.

Within trade and services, Table IX indicates that providers of personal and business services intend to reduce capital spending in 1985.

This group includes hotels and motels, which plan to slash spending next year. That slash, however, would follow a boom in 1984, a boom confirmed by F.W. Dodge data showing 1984 construction contracts for hotels and motels running more than 30% ahead of 1983. This boom may in part have been spurred by the 1981 tax law that greatly increased depreciation charges that could be taken on nonresidential structures such as motels.

This year, Congress scaled back the depreciation advantage somewhat, and that could be having an effect on 1985 plans; perhaps more important, though, is simply the fact that after so much building in 1984, the need for new hotels and motels has for the moment been satisfied.

Similarily, though less dramatically, railroads plan only a 5.5% increase in capital outlays next year compared to an estimated 38% surge this year.

The reverse is the case with airlines, where spending lost considerable altitude last year, but should take off in 1985 in response to increased traffic during 1983-84.

1986: Can It Really Be That Bad

While the survey is not exactly ebullient over 1985, neither is it pessimistic. The operative word for 1986, however, is slump. Total plant and equipment spending will slump 1.9% in 1986, the survey says, with half of the two dozen industries cutting expenditures. Is this believable?

If the economy goes into recession in 1985, then it's very conceivable that capital outlays would fall the following year as they did in 1982 and 1983, following the 1981-82 recession. Right now, though, most forecasters do not see an out-and-out recession in 1985. If the forecasters are right, then it's not likely that spending on new plant and equipment would actually decline in 1986.

What's more, when the survey looks ahead more than one year it has a habit of under predicting by far, as shown in Table 3. The probable reason is that companies' two-year ahead capital budgets are only in their formative stage, hence contain only projects that get an early green light. As time goes on, more projects get approved and added to the budget, so actual budgets for two years out end up bigger than initially reported.

Table 3. The Two-Year Projections are Usually Low

| | --% Change in Capital Spending-- | | |
|---|---|---|---|
| | Projected by Survey Two Years in Advance | Actual | Projected Minus Actual |
| 1972 | 4.6% | 10.8% | -6.2 |
| 1973 | 2.2 | 14.5 | -12.3 |
| 1974 | 4.1 | 14.0 | -9.9 |
| 1975 | 3.1 | 0.5 | 2.6 |
| 1976 | 3.9 | 8.7 | -4.8 |
| 1977 | 3.5 | 15.5 | -12.0 |
| 1978 | 4.0 | 16.7 | -12.7 |
| 1979 | 4.9 | 17.0 | -12.1 |
| 1980 | 3.3 | 9.3 | -6.0 |
| 1981 | 3.6 | 8.7 | -5.1 |
| 1982 | 8.8 | -1.6 | 10.4 |
| 1983 | 4.8 | -4.4 | 9.2 |

Nonetheless, Table 3 does suggest something disturbing: At no time in the past dozen years has the two-year-ahead projection signaled declining investment. In part, the decline could reflect lowered inflationary expectations. But according to the survey, firms' capital goods inflation expectations are in the 5% range, about where inflation was in the early 1970s when plans for two years ahead showed gains.

While 1986 spending will be determined by developments in 1985, the current projection for 1986 seems to suggest an unusually high degree of uncertainty about the future. It seems especially unusual in view of the strong 1984 economic recovery that featured an explosion of capital investment.

Notes on the Survey

Results in this report are based on the responses of more than 550 firms to a survey taken in September and October. These firms account for 28% of capital spending in the country (Table X). For capital spending (Table Y), firms supplied dollar estimates of future plant and equipment expenditures. Estimates for each year were summed by industry, and percentage changes between years were calculated. Each industry's percentage change for 1983-84, derived from the sample firms, was then applied to the industry's total capital spending in 1983 in order to derive the industry's total estimated capital spending in 1984. The 1984-85 percentage change was applied to the estimated 1984 total industry figure to derive the industry's total estimated 1985 capital spending. The procedure was the same for 1986. Firms with extreme percent changes in spending (outliers) were removed from the sample on a year-by-year basis. The source of the actual 1983 capital spending is the U.S. Department of Commerce. Once each industry's total estimated capital spending was derived, the figures were summed to derive estimates for the various aggregate groupings--durables, nondurables, all manufacturing, all nonmanufacturing and all business.

All data presented in this report other than the capital spending figures are based on percentage--rather than dollar--answers supplied by the sample firms. Percentage responses were weighted by size of firm within an industry to derive industry figures. Figures for the aggregates were then derived by weighting each industry by size.

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NOTE: The other durables category listed in the tables includes lumber, furniture, jewelry, toys, and transportation equipment other than autos and aerospace. Other nondurables includes apparel, tobacco, printing and publishing, and leather. The trade and services category includes retail and wholesale trade, banking, holding companies, insurance companies, hotels, laundries, and personal and business services. The communications and other category includes construction firms and transportation services other than airlines and railroads.

TABLE I

PLANS FOR CAPITAL SPENDING
(Billions of Dollars)

| Industry | 1983 ACTUAL | 1984 ESTIMATE | 1985 PLANNED | 1984-85 % CHANGE | 1986 PLANNED | 1985-86 % CHANGE |
|---|---|---|---|---|---|---|
| Iron & Steel | 2.97 | 3.12 | 4.30 | 37.8 | 4.73 | 10.0 |
| Nonferrous Metals | 2.44 | 3.15 | 3.31 | 5.2 | 3.74 | 12.8 |
| Electrical Machinery | 10.90 | 14.25 | 15.59 | 9.4 | 15.51 | -0.5 |
| Non-Electrical Machinery | 12.35 | 14.63 | 18.02 | 23.2 | 17.61 | -2.3 |
| Autos,Trucks & Parts | 7.17 | 11.13 | 15.70 | 41.1 | 15.15 | -3.5 |
| Aerospace | 4.93 | 6.11 | 6.69 | 9.5 | 6.64 | -0.8 |
| Fabricated Metals | 2.22 | 2.61 | 2.74 | 4.8 | 2.81 | 2.6 |
| Instruments | 2.51 | 3.38 | 4.01 | 18.7 | 4.26 | 6.1 |
| Stone,Clay & Glass | 2.45 | 2.70 | 3.18 | 17.6 | 2.90 | -8.7 |
| Other Durables | 3.84 | 5.14 | 5.25 | 2.1 | 5.77 | 9.9 |
| TOTAL DURABLES | 51.78 | 66.22 | 78.79 | 19.0 | 79.11 | 0.4 |
| Chemicals | 13.28 | 14.75 | 16.71 | 13.3 | 17.16 | 2.7 |
| Paper & Pulp | 6.18 | 6.83 | 7.51 | 9.9 | 8.07 | 7.5 |
| Rubber & Plastic | 1.91 | 2.62 | 2.89 | 10.2 | 3.08 | 6.6 |
| Petroleum | 23.48 | 26.92 | 30.66 | 13.9 | 30.72 | 0.2 |
| Food & Beverage | 6.60 | 7.37 | 8.62 | 17.0 | 8.58 | -0.5 |
| Textiles | 1.39 | 1.45 | 1.35 | -6.7 | 1.28 | -5.1 |
| Other Nondurables | 6.91 | 6.92 | 7.62 | 10.1 | 5.90 | -22.5 |
| TOTAL NONDURABLES | 59.75 | 66.86 | 75.36 | 12.7 | 74.80 | -0.7 |
| ALL MANUFACTURING | 111.53 | 133.08 | 154.15 | 15.8 | 153.91 | -0.2 |
| Mining | 11.83 | 12.64 | 12.79 | 1.2 | 11.63 | -9.1 |
| Railroads | 3.92 | 5.41 | 5.71 | 5.5 | 6.12 | 7.3 |
| Airlines | 3.77 | 2.92 | 4.01 | 37.2 | 4.30 | 7.4 |
| Electric Utilities | 34.99 | 36.26 | 34.81 | -4.0 | 31.02 | -10.9 |
| Gas Utilities | 7.00 | 9.52 | 10.87 | 14.2 | 11.31 | 4.0 |
| Communication & Other | 41.52 | 47.44 | 54.03 | 13.9 | 51.33 | -5.0 |
| Trade & Services | 87.94 | 104.38 | 109.91 | 5.3 | 109.47 | -0.4 |
| ALL NONMANUFACTURING | 190.97 | 218.57 | 232.13 | 6.2 | 225.18 | -3.0 |
| ALL BUSINESS | 302.50 | 351.65 | 386.29 | 9.8 | 379.09 | -1.9 |

TABLE II

INFLATION EXPECTATIONS
(Percentage Change)

| Industry | Expected % Change, 1984-85 | |
|---|---|---|
| | Plant & Equipment Prices | Product Prices |
| Iron & Steel | 5.8 | 5.7 |
| Nonferrous Metals | 5.9 | 3.6 |
| Electrical Machinery | 5.2 | 3.4 |
| Non-Electrical Machinery | 4.4 | 4.0 |
| Autos,Trucks & Parts | 4.5 | 4.0 |
| Aerospace | 3.7 | 4.3 |
| Fabricated Metals | 5.4 | 2.3 |
| Instruments | 5.8 | 1.3 |
| Stone,Clay & Glass | 6.0 | 4.0 |
| Other Durables | 6.3 | 3.9 |
| TOTAL DURABLES | 5.0 | 3.6 |
| Chemicals | 4.7 | 3.9 |
| Paper & Pulp | 4.9 | 5.3 |
| Rubber & Plastic | 4.6 | 4.4 |
| Petroleum | 4.3 | 3.7 |
| Food & Beverage | 5.3 | 3.9 |
| Textiles | 5.3 | 4.3 |
| Other Nondurables | 5.4 | 6.0 |
| TOTAL NONDURABLES | 4.7 | 4.4 |
| ALL MANUFACTURING | 4.9 | 4.0 |
| Mining | 5.9 | 3.1 |
| Railroads | 5.4 | 5.1 |
| Airlines | 6.7 | 4.0 |
| Electric Utilities | 6.0 | 5.8 |
| Gas Utilities | 5.1 | 6.0 |
| Communication & Other | 4.8 | 2.4 |
| Trade & Services | 5.8 | 3.9 |
| ALL NONMANUFACTURING | 5.6 | 4.0 |
| ALL BUSINESS | 5.3 | 4.0 |

TABLE III

SALES EXPECTATIONS
(Billions of Dollars)

| Industry | 1984 ESTIMATED | 1985 EXPECTED | 1984-85 % CHANGE |
|---|---|---|---|
| Iron & Steel | 56.9 | 64.2 | 12.7 |
| Nonferrous Metals | 63.1 | 65.7 | 4.1 |
| Electrical Machinery | 178.0 | 202.6 | 13.8 |
| Non-Electrical Machinery | 204.5 | 222.6 | 8.8 |
| Autos,Trucks & Parts | 190.2 | 201.6 | 6.0 |
| Aerospace | 72.7 | 84.5 | 16.3 |
| Fabricated Metals | 132.8 | 147.5 | 11.0 |
| Instruments | 56.1 | 61.5 | 9.5 |
| Stone,Clay & Glass | 54.3 | 58.5 | 7.8 |
| Other Durables | 155.5 | 170.7 | 9.8 |
| TOTAL DURABLES | 1,164.1 | 1,279.2 | 9.9 |
| Chemicals | 210.5 | 228.7 | 8.6 |
| Paper & Pulp | 95.3 | 105.4 | 10.6 |
| Rubber & Plastic | 52.5 | 55.5 | 5.8 |
| Petroleum | 197.6 | 214.8 | 8.7 |
| Food & Beverage | 296.0 | 322.4 | 8.9 |
| Textiles | 56.3 | 58.9 | 4.6 |
| Other Nondurables | 164.9 | 182.3 | 10.6 |
| TOTAL NONDURABLES | 1,089.7 | 1,168.0 | 7.2 |
| ALL MANUFACTURING | 2,253.8 | 2,447.3 | 8.6 |
| Mining | NA | NA | 12.1 |
| Railroads | NA | NA | 6.6 |
| Airlines | NA | NA | 6.3 |
| Electric Utilities | NA | NA | 9.5 |
| Gas Utilities | NA | NA | 3.3 |
| Communication & Other | NA | NA | 9.0 |
| Trade & Services | NA | NA | 13.6 |

TABLE IV

REAL SALES EXPECTATIONS
(Billions of 1984 Dollars)

| Industry | 1984 ESTIMATED | 1985 EXPECTED | 1984-85 % CHANGE |
|---|---|---|---|
| Iron & Steel | 56.9 | 60.7 | 6.7 |
| Nonferrous Metals | 63.1 | 63.4 | 0.5 |
| Electrical Machinery | 178.0 | 195.9 | 10.0 |
| Non-Electrical Machinery | 204.5 | 214.1 | 4.7 |
| Autos,Trucks & Parts | 190.2 | 193.9 | 1.9 |
| Aerospace | 72.7 | 81.1 | 11.5 |
| Fabricated Metals | 132.8 | 144.1 | 8.5 |
| Instruments | 56.1 | 60.7 | 8.1 |
| Stone,Clay & Glass | 54.3 | 56.3 | 3.7 |
| Other Durables | 155.5 | 164.4 | 5.7 |
| TOTAL DURABLES | 1,164.1 | 1,234.5 | 6.0 |
| Chemicals | 210.5 | 220.1 | 4.6 |
| Paper & Pulp | 95.3 | 100.1 | 5.1 |
| Rubber & Plastic | 52.5 | 53.2 | 1.3 |
| Petroleum | 197.6 | 207.1 | 4.8 |
| Food & Beverage | 296.0 | 310.2 | 4.8 |
| Textiles | 56.3 | 56.5 | 0.3 |
| Other Nondurables | 164.9 | 172.0 | 4.3 |
| TOTAL NONDURABLES | 1,089.7 | 1,119.2 | 2.7 |
| ALL MANUFACTURING | 2,253.8 | 2,353.7 | 4.4 |
| Mining | NA | NA | 8.7 |
| Railroads | NA | NA | 1.5 |
| Airlines | NA | NA | 2.2 |
| Electric Utilities | NA | NA | 3.5 |
| Gas Utilities | NA | NA | -2.5 |
| Communication & Other | NA | NA | 6.5 |
| Trade & Services | NA | NA | 9.3 |

TABLE V

CAPITAL SPENDING PLANS OF THE PETROLEUM INDUSTRY
(Millions of Dollars)

| FUNCTION | 1983 ACTUAL | 1984 ESTIMATE | 1985 PLANNED | 1984-85 % CHANGE | 1986 PLANNED | 1985-86 % CHANGE |
|---|---|---|---|---|---|---|
| Exploration and Production | 25,917 | 29,319 | 35,125 | 19.8 | 37,051 | 5.5 |
| Transportation (1) | 2,411 | 3,504 | 2,877 | -17.9 | 2,370 | -17.6 |
| Refining | 3,244 | 3,031 | 3,048 | 0.5 | 3,073 | 0.8 |
| Petrochemicals | 637 | 632 | 412 | -34.8 | 523 | 27.0 |
| Marketing | 2,103 | 3,060 | 3,272 | 6.9 | 2,326 | -28.9 |
| Other (2) | 3,275 | 4,263 | 3,425 | -19.7 | 3,507 | 2.4 |
| TOTAL | 37,587 | 43,809 | 46,159 | 9.9 | 48,851 | 1.4 |

NOTE: The figures in this table represent capital spending of integrated petroleum companies and independent refiners (both classified in the manufacturing sector) as well as spending by companies in the mining, transportation, and retail trade sectors. Confusion sometimes arises when the capital spending figures in this special table are compared with the petroleum figures in Table I. In Table I, the petroleum category includes spending of refiners and integrated companies only.

(1) Includes oil pipelines; does not include gas pipeline.
(2) Includes coal mining.

TABLE VI

CAPITAL SPENDING PLANS OF THE MINING INDUSTRY
(Millions of Dollars)

| INDUSTRY | 1983 ACTUAL | 1984 ESTIMATE | 1985 PLANNED | 1984-85 % CHANGE | 1986 PLANNED | 1985-86 % CHANGE |
|---|---|---|---|---|---|---|
| Coal | 3,802 | 5,018 | 4,252 | -15.3 | 4,432 | 4.2 |
| Iron Ore | 47 | 114 | 289 | 154.3 | 190 | -34.2 |
| Nonferrous | 1,201 | 2,002 | 1,693 | -15.4 | 2,259 | 33.4 |
| Nonmetallic | 917 | 1,175 | 1,131 | -3.7 | 1,254 | 10.8 |
| MINING INDUSTRY | 5,967 | 8,310 | 7,366 | -11.4 | 8,136 | 10.4 |

NOTE: The figures in this table are based on responses from steel, petroleum, nonferrous metals, and chemical companies that operate mines, as well as from companies whose main activity is mining. In Table I, the mining category includes only companies whose main business is mining. Mining expenditures by steel and other types of companies are included in the major industries those companies belong to.

TABLE VII

CAPITAL SPENDING IN THE CHEMICAL PROCESS INDUSTRY
(BILLIONS OF DOLLARS)

| INDUSTRY | 1983 ACTUAL | 1984 ESTIMATED | 1985 PLANNED | 1986 PLANNED |
|---|---|---|---|---|
| Chemicals | 13.28 | 14.75 | 16.71 | 17.16 |
| Petrochemicals* | 0.64 | 0.63 | 0.41 | 0.5[illegible] |
| Paper & Pulp | 6.18 | 6.83 | 7.51 | 8.07 |
| Rubber & Plastics | 1.91 | 2.62 | 2.89 | 3.08 |
| Stone,Clay & Glass | 2.45 | 2.70 | 3.18 | 2.90 |
| Petroleum Refining | 3.24 | 3.03 | 3.05 | 3.07 |
| Nonferrous Metals | 2.44 | 3.15 | 3.31 | 3.74 |
| Coal Products | 0.73 | 0.96 | 0.82 | 0.85 |
| Food & Beverages | 1.78 | 1.99 | 2.33 | 2.32 |
| Textiles | 0.28 | 0.29 | 0.27 | 0.26 |
| Other CPI | 1.24 | 1.02 | 1.13 | 0.87 |
| Total CPI** | 34.17 | 37.97 | 41.61 | 42.84 |

*Expenditures by petroleum companies. Petrochemical capital spending by chemical companies is included in chemical spending.

**Components may not add to total because of rounding.

TABLE VIII

CAPITAL SPENDING PLANS FOR THE ENERGY INDUSTRIES
(MILLIONS OF DOLLARS)

| INDUSTRY | 1983 ACTUAL | 1984 ESTIMATED | 1985 PLANNED | 1986 PLANNED |
|---|---|---|---|---|
| Coal Mining* | 3,802 | 5,018 | 4,252 | 4,432 |
| Electric Utilities | 34,990 | 36,257 | 34,791 | 31,010 |
| Gas Utilities | 7,000 | 9,519 | 10,871 | 11,305 |
| Petroleum Industry | 37,587 | 43,809 | 48,159 | 48,851 |
| Exploration & Production | 25,917 | 29,319 | 35,125 | 37,051 |
| Transportation | 2,411 | 3,504 | 2,877 | 2,370 |
| Refining | 3,244 | 3,031 | 3,048 | 3,073 |
| Petrochemicals | 637 | 632 | 412 | 523 |
| Marketing | 2,103 | 3,060 | 3,272 | 2,326 |
| Other* | 3,275 | 4,263 | 3,425 | 3,507 |
| Total Energy Industries | 83,379 | 94,604 | 98,073 | 95,599 |
| Total All Industry | 302,500 | 359,199 | 393,619 | 382,678 |
| Energy Industry Investment as % of Total | 27.6 | 26.3 | 24.9 | 25.0 |

*There is some duplication of investment in other petroleum and coal mining.

TABLE IX

DETAILED INDUSTRY SPENDING PLANS

| | Capital Spending Plans-% Change | | | Sales Forecast-% Change |
|---|---|---|---|---|
| | 1983-84 | 1984-85 | 1985-86 | 1984-85 |
| Anthracite Mining | -14.6 | 0.0 | 210.6 | 10.0 |
| Oil & Gas Extraction | 2.8 | -16.5 | -11.1 | 13.0 |
| Oil & Gas Field Services | 4.5 | -29.4 | -25.9 | 29.8 |
| General Building Contractors | 42.8 | 42.7 | -0.1 | NA |
| Meat Products | 1.9 | 6.2 | 9.4 | 10.0 |
| Preserved Fruits & Vegetables | 13.3 | 18.9 | 22.2 | NA |
| Grain Mill Products | 79.8 | 38.0 | -19.4 | 3.1 |
| Beverages | 11.0 | 15.7 | 0.0 | NA |
| Misc. Foods & Kindred Products | 16.1 | 9.4 | 0.0 | 10.0 |
| Tobacco Manufactures | -31.2 | 29.2 | -23.0 | NA |
| Weaving Mills, Cotton | -54.9 | 50.7 | -31.6 | -4.7 |
| Knitting Mills | 13.6 | -21.3 | 30.8 | 6.3 |
| Yarn & Thread Mills | -6.1 | -23.2 | -8.6 | NA |
| Apparel & other Textile Products | 23.4 | -30.9 | 3.4 | 4.0 |
| Lumber & Wood Products | 23.1 | 0.0 | 7.3 | 9.7 |
| Furniture & Fixtures | 20.4 | -21.5 | 21.6 | 9.7 |
| Printing & Publishing | -5.0 | 5.5 | -12.7 | 10.6 |
| Misc. Converted Paper Products | 45.3 | 0.0 | 0.0 | 10.0 |
| Industrial Chemicals | 19.1 | 26.0 | 5.0 | 9.5 |
| Drugs | 2.6 | -3.2 | 5.4 | 10.0 |
| Soap, Cleaners, & Toilet Goods | -22.6 | 25.9 | -20.6 | 20.0 |
| Paints & Allied Products | 52.1 | -30.8 | -11.1 | 25.0 |
| Agricultural Chemicals | 204.5 | -70.4 | NA | 4.0 |
| Miscellaneous Chemical Products | 54.2 | 16.9 | 14.9 | 9.2 |

## DETAILED INDUSTRY SPENDING PLANS

| | Capital Spending Plans-% Change | | | Sales Forecast-% Change |
|---|---|---|---|---|
| | 1983-84 | 1984-85 | 1985-86 | 1984-85 |
| Miscellaneous Plastics Products | 118.9 | -34.5 | -15.2 | 10.2 |
| Leather & Leather Products | 25.1 | -4.5 | 2.5 | 7.2 |
| Products of Purchased Glass | 19.6 | 15.3 | -13.2 | 6.9 |
| Cement, Hydraulic | 33.0 | 32.9 | -1.8 | 7.6 |
| Structural Clay Products | 73.5 | 23.8 | -7.6 | 9.9 |
| Concrete, Gypsum, & Plaster Products | 8.4 | 32.9 | -10.3 | 11.1 |
| Misc. Nonmetallic Mineral Products | -8.2 | 14.3 | 10.2 | NA |
| Blast Furnance & Basic Steel Products | 5.1 | 37.8 | 8.6 | 12.7 |
| Primary Nonferrous Metals | 47.7 | 9.1 | 7.8 | 4.6 |
| Nonferrous Rolling & Drawing | 43.3 | -16.4 | 21.1 | 3.2 |
| Metal Cans & Shipping Containers | 20.0 | 42.6 | -16.0 | NA |
| Cutlery, Hand Tools, & Hardware | 36.1 | 16.2 | 24.8 | 13.3 |
| Fabricated Structural Metal Products | 6.0 | -12.2 | 16.0 | 10.6 |
| Screw Machine Products, Bolts, etc. | -11.3 | 7.1 | 11.1 | 0.0 |
| Misc. Fabricated Metal Products | 80.1 | 22.4 | -21.8 | 13.2 |
| Farm & Garden Machinery | 12.9 | 77.1 | -15.6 | 7.5 |
| Construction & Related Machinery | -0.8 | 31.5 | 169.5 | 11.1 |
| Metalworking Machinery | 90.9 | -4.4 | 24.1 | 6.6 |
| Special Industry Machinery | 114.4 | -13.2 | -33.3 | 6.1 |
| General Industrial Machinery | 81.2 | 16.5 | 5.3 | 9.6 |
| Office & Computing Machines | 37.6 | 12.2 | -7.1 | 9.7 |
| Refrigeration & Service Machinery | 34.2 | -7.5 | 16.2 | 17.3 |
| Electrical Industrial Apparatus | 73.5 | 34.1 | 5.6 | 6.5 |
| Household Appliances | 3.4 | 8.1 | 3.8 | 7.2 |
| Electric Lightning & Wiring Equipment | 53.7 | -15.9 | 33.8 | 10.5 |
| Communication Equipment | 42.2 | 14.8 | -3.4 | 14.5 |
| Electronic Components & Accessories | 60.9 | 9.0 | 5.8 | 17.5 |
| Misc. Electrical Equipment & Supplies | 52.6 | 14.8 | 6.0 | 10.8 |

## DETAILED INDUSTRY SPENDING PLANS

| | Capital Spending Plans-% Change | | | Sales Forecast-% Change |
|---|---|---|---|---|
| | 1983-84 | 1984-85 | 1985-86 | 1984-85 |
| Railroad Equipment | 57.2 | 14.5 | -2.3 | NA |
| Engineering & Scientific Instruments | 57.5 | 18.0 | 5.7 | 26.1 |
| Medical Instruments & Supplies | 3.7 | -8.4 | 12.7 | 40.0 |
| Miscellaneous Manufacturing Industries | 23.3 | 19.0 | 12.5 | 9.2 |
| Trucking & Warehousing | 104.1 | 0.8 | -17.6 | 13.2 |
| Telephone Communication | 8.7 | 10.7 | -1.6 | 7.9 |
| Hardware, Plumbing & Heating Equipment--Whole. | 11.5 | 1.9 | 4.3 | NA |
| Farm-Product Raw Materials | 2.5 | 2.4 | 5.5 | 7.0 |
| Department Stores | 11.0 | 13.8 | 18.8 | 10.1 |
| Insurance Carriers | 40.9 | 11.9 | -7.7 | 10.6 |
| Hotels, Motels & Tourist Courts | 69.5 | -66.7 | 30.8 | 14.7 |
| Computer & Data Processing Services | 30.4 | 9.3 | 14.3 | 16.0 |
| Miscellaneous Business Services | 13.2 | -25.1 | 17.2 | 19.6 |
| Amusement & Recreation Services | -52.9 | 8.6 | 7.9 | 10.8 |
| Educational Services | 43.2 | -37.3 | -7.6 | 18.0 |
| Miscellaneous Services | 0.6 | -33.3 | 37.0 | 5.2 |
| Wholesale & Retail Trade | 21.5 | 7.8 | -2.7 | 10.3 |
| Finance, Insurance & Retail | 29.2 | 7.2 | -3.3 | 9.8 |
| Personal & Business Services | 9.0 | -15.6 | 15.9 | 15.7 |
| Health & Miscellaneous Services | 8.1 | 1.9 | -16.2 | 16.6 |

NOTE: Companies responding to McGraw-Hill's capital spending surveys are assigned 3-digit SIC codes, based on the way they are classified by the Securities and Exchange Commission. In some cases, companies produce such a broad array of products that they are not assigned a 3-digit number, only a 2-digit number. Such companies' survey responses are included in the results of Table I of this report, but not in Table X. In other cases, even though a company is assigned a 3-digit code, it may do a significant amount of business in other categories.

TABLE X

SURVEY SAMPLE SIZE

| Industry | Percentage of Capital Spending Covered by Survey |
|---|---|
| Iron & Steel | 35.4 |
| Nonferrous Metals | 37.7 |
| Electrical Machinery | 46.0 |
| Non-Electrical Machinery | 7.7 |
| Autos,Trucks & Parts | 65.3 |
| Aerospace | 36.1 |
| Fabricated Metals | 18.8 |
| Instruments | 27.3 |
| Stone,Clay & Glass | 32.3 |
| Other Durables | 9.8 |
| TOTAL DURABLES | 32.2 |
| Chemicals | 47.0 |
| Paper & Pulp | 49.6 |
| Rubber & Plastic | 9.7 |
| Petroleum | 65.3 |
| Food & Beverage | 30.1 |
| Textiles | 9.4 |
| Other Nondurables | 23.5 |
| TOTAL NONDURABLES | 47.8 |
| ALL MANUFACTURING | 40.6 |
| Mining | 19.5 |
| Railroads | 42.4 |
| Airlines | 30.4 |
| Electric Utilities | 66.0 |
| Gas Utilities | 25.7 |
| Communication & Other | 13.0 |
| Trade & Services | 3.4 |
| ALL NONMANUFACTURING | 20.1 |
| ALL BUSINESS | 27.6 |

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# McGraw-Hill Economics

1221 Avenue of the Americas, 37th Floor
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## 38th ANNUAL McGRAW-HILL SPRING SURVEY OF BUSINESS' PLANS FOR NEW PLANTS AND EQUIPMENT, 1985-88

With the economy losing some of its bounce lately, U.S. business has shaved its plans to invest in new plant and equipment in 1985.

McGraw-Hill's latest survey, conducted in March and April, found that business intends to raise U.S. capital outlays this year 9.9% to $388.4 billion (Table I).* In a similar survey conducted last January and February, respondents said they would raise outlays 10.9%.

Business also became slightly more pessimistic about inflation, now expecting prices of plant and equipment to rise 5.1% this year (Table VIII) compared to a 4.9% expectation last winter. Putting the spending and price projections together yields a "real" spending projection this year of 4.6%--down 1.1 percentage points from intentions reported in the previous survey.

The current survey also came up with disturbing results for 1986: Expenditures are projected to drop 2%. Survey projections beyond the current year tend to be weak, but they rarely show absolute declines.

Growing pessimism may reflect less confidence in the economy. Manufacturers now expect real sales to increase 3.7% this year (Table VII),

*Tables denoted by Roman numerals are at back of report. Dollar figures in this report are not directly comparable to those in earlier reports due to revisions in historical data by the U.S. Commerce Department.

down from a projection of 4.4% when McGraw-Hill asked companies for their 1985 sales expectations last fall. Most nonmanufacturing industries have also lowered their 1985 sales projections.

The survey also found that despite weakening capital spending and sales projections, manufacturers expect to increase capacity nearly 5% this year and more than 5% in 1986 (Table IV). These increases reflect last year's boost in capital spending for expansion coupled with a further rise this year to $57 billion, or 35% of total capital outlays (Table II). Similarly, construction outlays by manufacturers are projected to rise, from 14% of total capital investment last year to 15% this year (Table III).

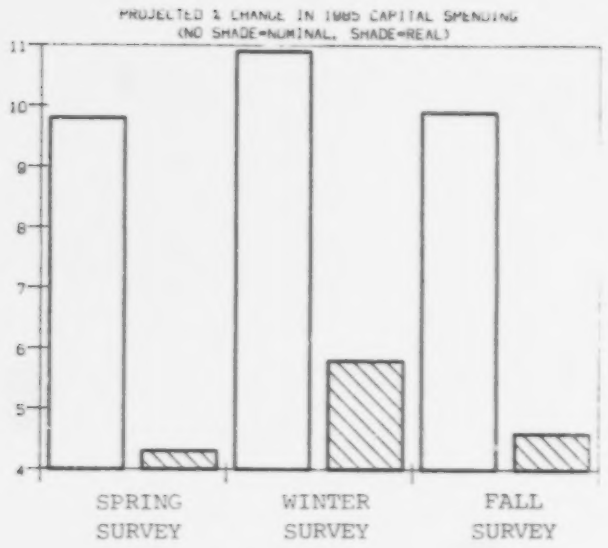
These results are based on a survey of more than 500 companies that in 1984 spent $95.5 billion on new plant and equipment--27% of all capital spending in the U.S. (Table IX). The capital expenditure figures in this report are adjusted to reflect expenditures by all companies in the U.S., not just companies responding to the survey. Data refer to the U.S. only.

Quieting the Capital Spending Boom

The economy last year boomed, thanks in part to a capital spending boom. Beginning in the second half of 1984, however, the economy started to wobble; and in the first quarter of 1985 economic growth came in at only a 1.3% annual rate compared to 6.8% for 1984 as a whole. As the survey hints, this wobbling may now be causing U.S. companies to pare capital budgets. If such is the case, it raises questions about the overall strength of the 1985 economy since capital spending has been so strong a pillar of growth in this business expansion.

Chart 1 shows how survey respondents first raised their 1985 spending plans last winter, compared to last fall, and have now lowered them again.

CHART 1




While the reduction in plans is small, it is anomalous: Usually, the spring survey shows an increase in plans compared to both the fall and the winter surveys. In fact, the spring survey usually shows so much of an increase that it overshoots actual capital spending for the year. This point is demonstrated in Table 1, spring and fall survey projections during the past twenty years compared to the actual outcomes.

Besides the spring survey result, first-quarter gross national product (GNP) data also suggest a slowing of the capital investment juggernaut: Real business investment in equipment and structures rose at only a 3.4% annual pace, the lowest rate of expansion in the past two years, as shown in Chart 2. (The GNP capital spending numbers are not directly comparable to those in this report, but they tend to move in the same manner.)

Yet further evidence of an investment slowdown comes from new orders for nondefense capital goods, the bellwether statistical series for projecting equipment purchases. As shown in Chart 3, new orders surged during the earlier stages of the business expansion, but have flattened during the past

Table 1. Spring Survey Projection Usually Too Bullish

| | ----% Change in Capital Spending----- | | |
|---|---|---|---|
| | Fall Survey Projection | Spring Survey Projection | Actual |
| 1965 | 4.9 | 15.1 | 16.1 |
| 1966 | 7.8 | 18.6 | 18.3 |
| 1967 | 4.9 | 5.6 | 3.3 |
| 1968 | 4.9 | 7.8 | 5.0 |
| 1969 | 7.6 | 13.0 | 12.2 |
| 1970 | 8.3 | 8.9 | 7.2 |
| 1971 | 2.4 | 3.9 | 1.1 |
| 1972 | 6.9 | 14.5 | 11.3 |
| 1973 | 10.6 | 19.3 | 16.1 |
| 1974 | 13.6 | 19.5 | 16.4 |
| 1975 | 11.8 | 5.5 | 2.0 |
| 1976 | 8.8 | 12.9 | 11.3 |
| 1977 | 13.0 | 17.5 | 16.7 |
| 1978 | 11.1 | 17.3 | 17.8 |
| 1979 | 9.9 | 15.7 | 17.1 |
| 1980 | 9.6 | 12.2 | 10.9 |
| 1981 | 11.9 | 12.0 | 11.5 |
| 1982 | 9.6 | - 3.9 | -1.5 |
| 1983 | -2.1 | -1.3 | -1.9 |
| 1984 | 9.4 | 18.6 | 16.0 |

CHART 2

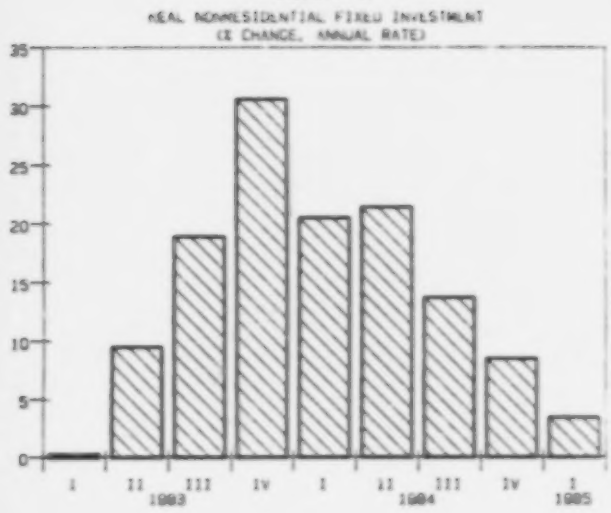
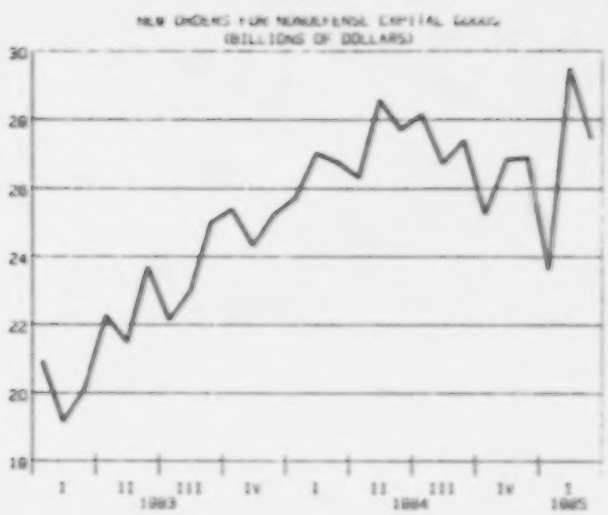



CHART 3




year. Since this series tracks orders placed at U.S. plants only, it does not capture the tremendous amount of capital equipment now imported by U.S. companies; hence this series has been tracking lower than the spending data, which do include purchases of imports. Nonetheless, at some point, persistent weakness in the series would presumably reflect weakness in spending. In fact, in the first quarter, inflation-adjusted purchases of equipment did decline.

On the construction side of capital spending, there are mixed signals. Outlays were strong in the first quarter; but significant strength came from office construction, where tax shelter considerations rather than economics seem to keep the glass curtains rising. Meanwhile, F.W. Dodge data on construction contracts point to a slowing of construction sometime this year.

Data outside the survey relevant to the course of capital investment are contained in Tables 2 and 3.

Table 2. Capital Equipment Investment Indicators

| | 1984 | | | | 1985 | Years | | |
|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | I | 82 | 83 | 84 |
| **Demand Indicators** | | | | | | | | |
| Nondefense Capital Goods Shipments--Billion $ | 296.1 | 310.5 | 318.6 | 328.8 | 317.4 | 270.9 | 272.0 | 313.5 |
| In Billion 1972 $ | 121.4 | 126.2 | 129.0 | 132.9 | 127.1 | 116.0 | 113.1 | 127.3 |
| Nondefense Capital Goods Orders--Billion $ | 318.0 | 330.5 | 329.1 | 316.0 | 322.4 | 247.3 | 272.7 | 323.4 |
| In Billion 1972 $ | 130.3 | 134.3 | 133.2 | 127.7 | 129.1 | 105.9 | 113.4 | 131.4 |
| Business Equipment Output--Billion 1972 $ | 106.5 | 108.8 | 116.6 | 115.2 | 116.6 | 97.4 | 94.0 | 111.8 |
| **Balance Sheet Indicators** | | | | | | | | |
| Prime Rate (%) | 11.07 | 12.31 | 12.99 | 11.80 | 10.54 | 14.86 | 10.79 | 12.04 |
| Internal Corporate Cash Flow--Billion $ | 258.4 | 268.0 | 268.9 | 275.7 | 282.4 | 220.5 | 232.5 | 267.7 |
| As % of Capital & Inventory Spending | 74.2 | 75.7 | 70.6 | 78.0 | 75.5 | 100.3 | 94.5 | 74.6 |
| Ratio of Debt Service to Cash Flow | 0.517 | 0.504 | 0.521 | 0.480 | 0.477 | 0.522 | 0.525 | 0.505 |
| Ratio of Short-Term to Total Liabilities | 0.50 | 0.52 | 0.52 | 0.52 | 0.52 | 0.49 | 0.49 | 0.52 |
| Commercial & Industrial Loans--Billion $ | 222.0 | 232.6 | 239.0 | 243.9 | 246.3 | 217.8 | 217.1 | 243.9 |

Table 3. Structures Investment Indicators

| | 1984 | | | | 1985 | Years | | |
|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | I | 82 | 83 | 84 |
| **Demand Indicators** | | | | | | | | |
| Nonresidential Construction Contracts--Billion $* | 15.5 | 19.4 | 19.4 | 19.4 | 16.7 | 14.8 | 15.5 | 18.4 |
| Manufacturing Operating Rate (%) | 79.4 | 80.3 | 80.9 | 79.8 | 79.5 | 70.5 | 74.2 | 80.1 |
| Office Vacancy Rate (%)** | 13.1 | 13.5 | 14.2 | 14.7 | NA | 8.0 | 11.7 | 13.9 |
| **Financial Indicators** | | | | | | | | |
| Corporate Bond Rate (%) | 12.28 | 13.21 | 12.99 | 12.35 | 12.26 | 13.79 | 12.04 | 12.71 |
| Debt/Equity Ratio | 1.138 | 1.178 | 1.193 | 1.217 | 1.209 | 1.176 | 1.133 | 1.181 |
| Short-Term to Total Liabilities | 0.50 | 0.52 | 0.52 | 0.52 | 0.52 | 0.49 | 0.49 | 0.52 |
| Ratio of Corporate Interest Expense to Cash Flow | 0.655 | 0.673 | 0.694 | 0.684 | 0.687 | 0.773 | 0.706 | 0.676 |

*F.W. Dodge
**Coldwell Banker

In sum, both the survey and other information suggest not only a slowdown from last year's torrid growth in business investment; they indicate that the slowdown could be significant. If the survey is accurate, it would mean going from a 16% leap in plant and equipment spending in 1984 to a 9.9% rise in 1985. In real terms, the fall in growth would be from nearly 14% to less than 5%. Despite such a decline, capital investment would still be one of the leading sectors of the economy this year. Yet because capital investment plans are often volatile, any further stumbling by the economy could lead to sharper cuts in capital budgets, which in turn would hurt the economy further.

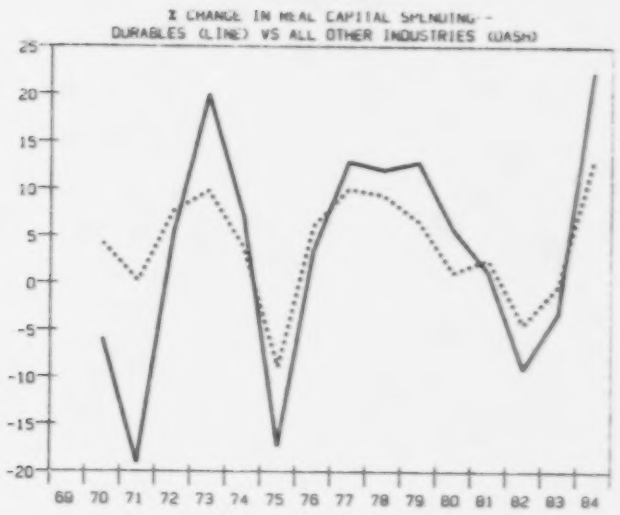
At present, however, a severe outcome is considered unlikely in 1985:. Largely because consumers are still in good shape, the economy is not unraveling. But combined with other evidence on investment, the ratcheting down of planned capital spending in 1985 and the outright declines reported for 1986 create doubts about the sustainability of the current business expansion beyond the current year.

Durables Dominate

As in all McGraw-Hill surveys in the past year, the biggest growth in 1985 investment has been projected by durable goods industries. This result is hardly surprising, given that durables producers' capital budgets swing radically with the ups and downs of the business cycle--much more radically than spending by nondurables and nonmanufacturing industries, as shown in Chart 4.

Within the durables group, however, there is one industry reporting no increase in spending plans this year--electrical machinery. This result also turned up in the winter survey, and it is disconcerting, since electrical machinery is considered a high-tech industry destined to lead the U.S. economy. Table XIV shows that the biggest expected cuts in electrical

CHART 4



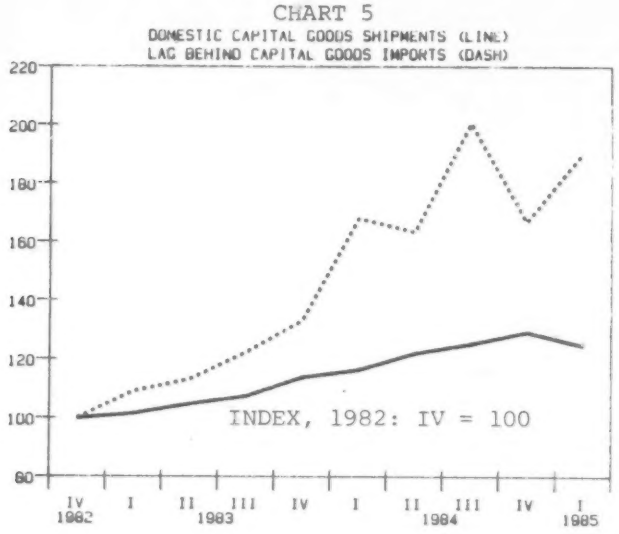

machinery are in basic industrial electrical equipment. In contrast, makers of communications equipment intend a substantial increase in capital outlays this year of more than 16%. At the same time, the high-tech electronic components industry, which includes semiconductors, plans a small cut in 1985 plant and equipment investment this year, perhaps reflecting the recent sharp weakening in an important market for components--the computer industry.

Computer makers themselves, included in nonelectrical machinery, report a small investment increase this year of 6%. Much of the rest of the nonelectrical machinery industry, however, intends huge hikes in investment, lifting the overall category to a 22% planned gain in 1985.

This planned jump in capital outlays reflects last year's strong demand for machinery as well as the need for U.S. machinery producers to modernize to meet severe competition from abroad. For while many domestic machinery makers enjoyed rapid sales growth during the capital spending boom, foreign makers enjoyed more rapid growth as the U.S. dollar skyrocketed. If domestic makers are to hold on to their markets as demand for capital goods slows down, they will have to streamline operations or pray for a rapid demise of the

dollar. Chart 5 shows shipments of domestically produced machinery compared to imported capital goods in the past couple of years. (Both sets of figures exclude motor vehicles. Domestic shipments include exports by U.S. companies.)

CHART 5

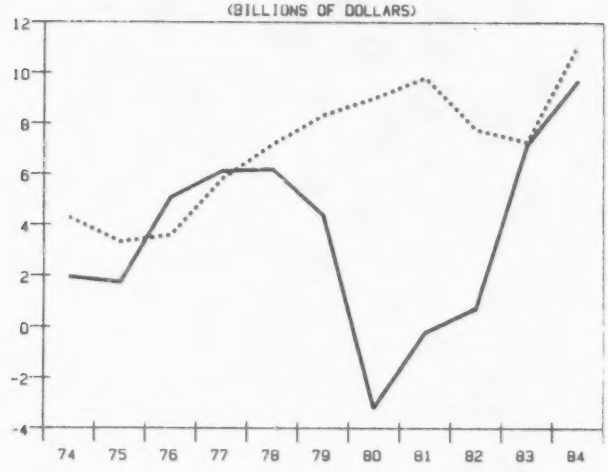



Speaking of streamlining operations to combat foreign competition, the auto industry has been the example par excellence in recent years. In 1985 makers of motor vehicles and parts plan the biggest percentage increase in capital investment among durable goods manufacturers, and second to airlines among all major industries.

Besides the need to modernize and cut production costs, strong sales of domestically produced vehicles to both consumers and business are stimulating investment plans and providing the profits to fund those plans. Last year, U.S. carmakers earned record profits; and while profits may not be as good this year due to removal of import restraints on Japanese cars, investment typically reflects earlier earnings, as shown in Chart 6. What's more, if auto makers expect a difficult battle against imports for future market share, then additional heavy investment will be needed to reduce the breakeven point further still.

CHART 6

AUTO INDUSTRY PROFITS (LINE)
& CAPITAL SPENDING (DASH)
(BILLIONS OF DOLLARS)




Most other durable goods industries project double-digit percentage boosts in capital spending this year. The exception is nonferrous metals, where production stagnated in the second half of 1984. Looking on the brighter side, production has recovered a bit of late; and investment plans of nonferrous metals manufacturers are stronger now than they were last winter.

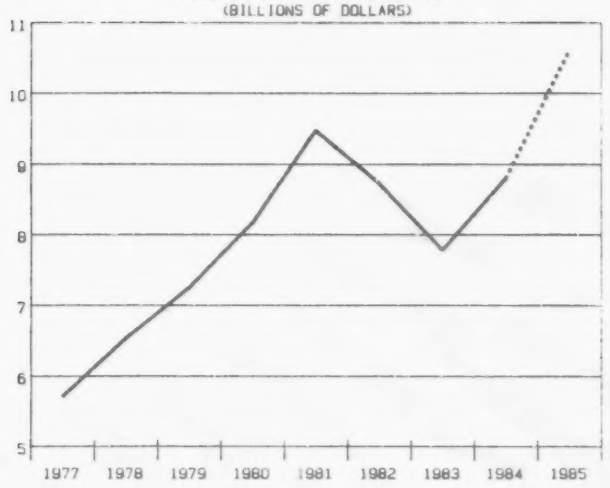
Within nondurable goods manufacturing, only the textile industry projects a cut in capital spending in 1985; but as with nonferrous metals, current plans reflect some improvement from the winter survey.

The potpourri of industries comprising "other" nondurables plan the biggest increase in investment this year among nondurables producers. As Table XIV shows, all industries in the group--tobacco, leather, apparel, and printing and publishing--intend substantial hikes in capital budgets.

After the "other" group, the nondurables industry with the most ambitious growth in mind this year is food, where increased emphasis on processed food is spurring firms to automate and control manufacturing operations more closely. The recent and planned spurt in food industry capital spending is depicted in Chart 7.

CHART 7

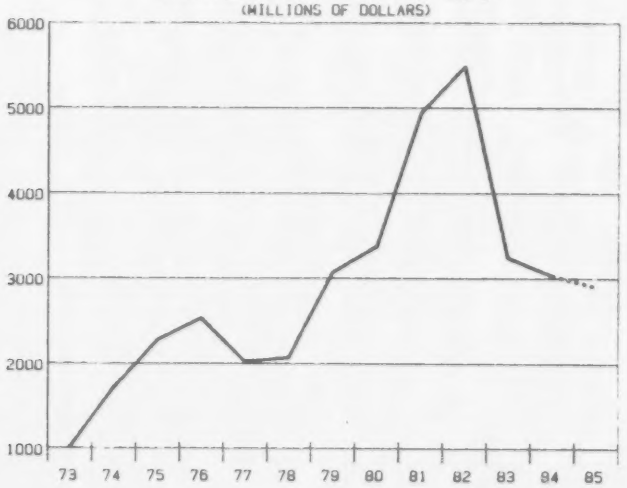
FOOD CAPITAL SPENDING SPURTS
(BILLIONS OF DOLLARS)




The petroleum industry, perhaps surprisingly, is also slating a large increase in capital investment in 1985. As Table X shows, the only sector of the oil business where spending will be cut is refining, which in the early 1980s had garnered substantial capital resources (Chart 8) as companies strove to cut costs in the wake of huge crude price increases. Apparently the bulk of those upgrading projects has been completed, meaning that investment in refineries is settling down to replacement spending.

CHART 8

PETROLEUM REFINING INVESTMENT SLIPS
(MILLIONS OF DOLLARS)



The surprising aspect of strong oil spending plans is that although falling prices last year in both crude and refined products brought industry profitability under fire, integrated companies plan a large rise in outlays on marketing and transportation. And despite widespread expectations that crude prices won't be going anywhere, oil companies are planning to raise 1985 exploration and production outlays by a modest amount. In petrochemicals, despite intensifying worldwide competition that puts U.S. plants at a disadvantage, oil companies plan a large hike in domestic investment this year. That hike would come, however, after a period of cutbacks and would still leave petrochemical spending lower than it was a few years ago.

Interestingly, the chemical industry seems to be following the same tack as the oil industry by investing in industrial chemicals. For while the industry as a whole plans an 10.7% investment rise this year (Table I), Table XIV shows that the industrial sector will be getting the emphasis while consumer chemicals will be cut. Industry thinking may be that though the longer-term outlook for industrial chemical production in the U.S. is far from bright, in order to survive to the longer-term domestic plants will have to boost productivity and reduce unit labor costs. As Chart 9 illustrates, U.S.

CHART 9

chemical companies did reduce unit labor costs last year, which combined with an 11% sales gain lifted industry profits by 19%. But by yearend 1984 costs were rising, perhaps refocusing chemical executives' attention on needed modernization projects.

In the nonmanufacturing sector of the economy, plans by industry are either weak or strong, with no middle ground. Mining, including oil and gas well drilling, is slated to reduce capital outlays 9% this year (Table I). But this category is influenced most heavily by oil and gas. In contrast, the detailed mining table, Table XI, shows that some sectors of mining--nonmetallic and nonferrous--plan increases in 1985.

Trade and services firms are also writing weak capital budgets this year, expecting on average to keep capital outlays constant. In trade alone, a projected cut in spending (Table XIV) could merely mirror the huge increase in commercial construction in 1984, and in the last quarter of 1984 in particular.

More fundamentally, the 1% capital spending increase projected by electric utilities reflects slow growth in energy demand.

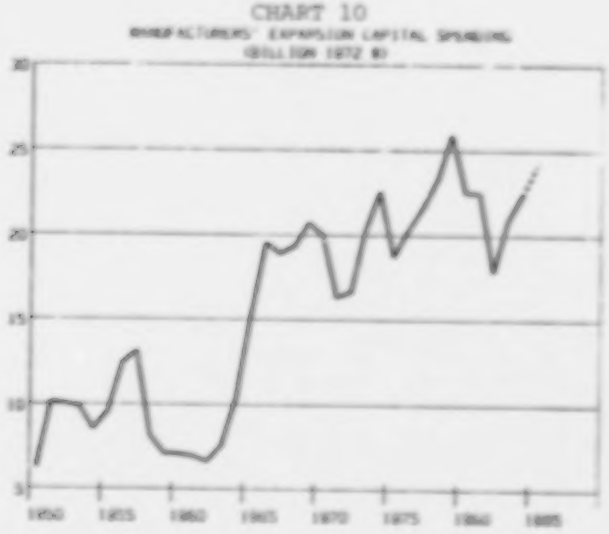
On the upside, airlines plan a 61% increase in spending as the industry continues to ride the economic expansion. Communications companies, gearing up after cutting outlays in 1982 and 1983, project a substantial investment increase this year. Railroads and gas utilities also intend to raise outlays significantly.

## Expansion Spending Continues Cyclical Upswing

Besides projecting overall levels of capital spending, the survey also gathers information on allocation of spending in two ways: expansion versus modernization and replacement, and construction versus equipment.

Table II shows that manufacturers intend to raise the share of spending on expansion from 35% in 1984 to 36% in 1985. Chart 10 translates these shares into the amount spent on expansion, measured in constant 1972 dollars, with the survey's 1985 estimate shown as a dash.

CHART 10



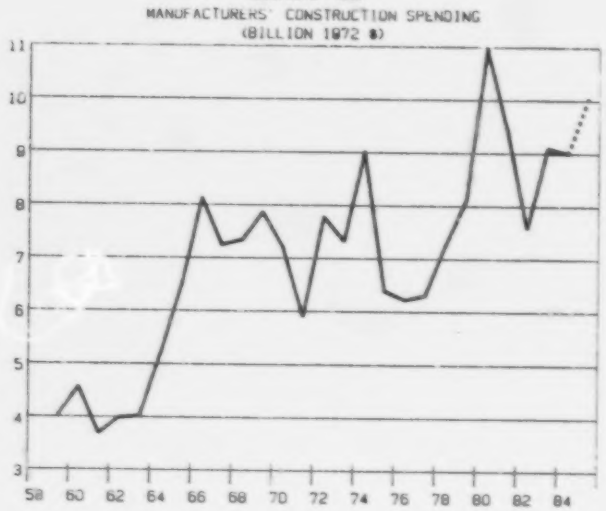
Not surprisingly, expansion expenditures are very cyclical, rising when the economy is strong and falling when the economy is soft. Chart 10 does, however, present points of interest. In particular, despite recent increases in expansion outlays, real spending on capacity expansion is only about equal to average levels of the late 1970s. The explanation: Despite the rapid 1983-84 economic rebound, which spurred an enormous increase in capital spending, most investment went for factory modernization as manufacturers sought to cut costs in an era of disinflation and intensifying foreign competition.

If the economic recovery stays intact into 1986, however, real manufacturing investment on expansion will probably reach the previous peak, set in 1979. Meanwhile, investments made last year and in progress this year

will lead to substantial capacity increases of some 5% in both 1985 and 1986 (Table IV).

The construction data, plotted in Chart 11, tell a similar story. (Note that expansion and construction are not synonymous, since companies can expand by installing more productive equipment rather than by building new factories.) Construction spending is on the upswing, but is still below its previous peak. There is a lag, however, between overall economic expansion and manufacturers' spending on brick and mortar, so it is probable that construction spending will continue to grow next year even if the economy cools off considerably.

CHART 11




Stormclouds Gather Over 1986

That the economy will cool off considerably seems implicit in companies' investment plans for 1986--down 1.9%. The silver lining is that the spring survey's year-ahead projections are usually too weak. At this time last

year, for example, spring survey respondents projected only a 6.4% investment increase in 1985, while the current survey estimate is 9.9%. The tarnish on the silver lining is that rarely does the spring survey project a decline in spending one year out.

Projected spending declines in 1986 are spread throughout both the manufacturing and nonmanufacturing sectors; but manufacturing overall does plan a small rise next year. Nonetheless, even keeping the survey's year-ahead track record in mind, the projections do not point to a good year in 1986.

Notes on the Survey

Results in this report are based on the responses of about 520 firms to a survey taken in March and April. These firms account for 28% of capital spending in the country (Table IX). For capital spending (Table I), firms supplied dollar estimates of future plant and equipment expenditures. Estimates for each year were summed by industry, and percentage changes between years were calculated. Each industry's percentage change for 1984-85, derived from the sample firms, was then applied to the industry's total capital spending in 1984 in order to derive the industry's total estimated capital spending in 1985. The 1984-85 percentage change was applied to the estimated 1984 total industry figure to derive the industry's total estimated 1985 capital spending. The procedure was the same for 1986 and 1987. Firms with extreme percent changes in spending (outliers) were removed from the sample on a year-by-year basis. The source of the actual 1984 capital spending is the U.S. Department of Commerce. Once each industry's total estimated capital spending was derived, the figures were summed to derive estimates for the various aggregate groupings--durables, nondurables, all

manufacturing, all nonmanufacturing and all business.

All data presented in this report other than the capital spending figures are based on percentage--rather than dollar--answers supplied by the sample firms. Percentage responses were weighted by size of firm within an industry to derive industry figures. Figures for the aggregates were then derived by weighting each industry by size. The weighting scheme varied according to the data being processed. For example, percentage changes in sales and product prices were weighted by sales levels while percentage changes in plant and equipment price expectations were weighted by capital spending.

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NOTE: The other durables category listed in the tables includes lumber, furniture, jewelry, toys, and transportation equipment other than autos and aerospace. Other nondurables includes apparel, tobacco, printing and publishing, and leather. The trade and services category includes retail and wholesale trade, banking, holding companies, insurance companies, hotels, laundries, and personal and business services. The communications and other category includes construction firms and transportation services other than airlines and railroads.

TABLE I

PLANS FOR CAPITAL SPENDING
(Billions of Dollars)

| INDUSTRY | 1984 ACTUAL | 1985 PLANNED | 1984-85 % CHANGE | 1986 PLANNED | 1987 PLANNED | 1988 PLANNED |
|---|---|---|---|---|---|---|
| Iron & Steel | 3.52 | 4.54 | 28.8 | 5.31 | 5.11 | 4.91 |
| Nonferrous Metals | 2.13 | 2.28 | 7.2 | 2.48 | 2.00 | 2.06 |
| Electrical Machinery | 14.55 | 14.51 | -0.2 | 15.08 | 15.01 | 15.35 |
| Non-Electrical Machinery | 15.36 | 18.80 | 22.4 | 20.30 | 21.69 | 22.86 |
| Autos,Trucks & Parts | 11.11 | 16.16 | 45.5 | 14.61 | 14.88 | 15.93 |
| Aerospace | 3.55 | 4.25 | 19.7 | 3.84 | 3.50 | 3.66 |
| Fabricated Metals | 3.42 | 4.06 | 18.7 | 4.26 | 4.42 | 4.59 |
| Instruments | 3.28 | 3.91 | 19.1 | 4.31 | 4.68 | 5.14 |
| Stone,Clay & Glass | 3.09 | 3.58 | 15.7 | 3.60 | 3.43 | 3.28 |
| Other Durables | 5.95 | 6.80 | 14.2 | 7.06 | 7.29 | 7.71 |
| TOTAL DURABLES | 65.96 | 78.88 | 19.6 | 80.85 | 82.01 | 85.49 |
| Chemicals | 15.30 | 16.93 | 10.7 | 17.38 | 18.05 | 18.60 |
| Paper & Pulp | 7.15 | 7.59 | 6.2 | 9.09 | 8.34 | 7.85 |
| Rubber & Plastic | 3.10 | 3.43 | 10.5 | 3.76 | 3.98 | 4.33 |
| Petroleum | 25.50 | 29.86 | 17.1 | 32.96 | 34.52 | 35.34 |
| Food & Beverage | 8.80 | 10.62 | 20.7 | 10.54 | 10.63 | 11.12 |
| Textiles | 1.92 | 1.84 | -3.9 | 1.75 | 1.93 | 1.97 |
| Other Nondurables | 10.67 | 13.51 | 26.6 | 9.09 | 5.82 | 6.55 |
| TOTAL NONDURABLES | 72.44 | 83.78 | 15.7 | 84.57 | 83.27 | 85.75 |
| ALL MANUFACTURING | 138.40 | 162.67 | 17.5 | 165.43 | 165.29 | 171.24 |
| Mining | 16.88 | 15.33 | -9.2 | 16.66 | 17.56 | 15.94 |
| Railroads | 6.77 | 8.02 | 18.4 | 8.25 | 8.95 | 9.58 |
| Airlines | 3.55 | 5.72 | 61.1 | 6.31 | 5.47 | 5.54 |
| Electric Utilities | 37.09 | 37.53 | 1.2 | 32.00 | 28.74 | 29.54 |
| Gas Utilities | 10.30 | 11.78 | 14.4 | 12.07 | 12.73 | 13.43 |
| Communication & Other | 33.18 | 40.68 | 22.6 | 38.45 | 36.48 | 35.41 |
| Trade & Services | 107.38 | 106.68 | -0.7 | 101.82 | 103.14 | 107.74 |
| ALL NONMANUFACTURING | 215.16 | 225.72 | 4.9 | 215.56 | 213.07 | 217.18 |
| ALL BUSINESS | 353.56 | 388.39 | 9.9 | 380.98 | 378.36 | 388.42 |

NOTE: The historical plant and equipment expenditure data have been revised by the U.S. Department of Commerce. Hence the figures published in this survey are not directly comparable to figures in previous surveys.

TABLE II

EXPANSION VERSUS MODERNIZATION
(Percent of Capital Spending)

| INDUSTRY | ACTUAL 1984 | | PLANNED 1985 | | PLANNED 1986 | |
|---|---|---|---|---|---|---|
| | Expans. | Replace. Modern. | Expans. | Replace. Modern. | Expans. | Peplace. Modern. |
| Iron & Steel | 16 | 84 | 4 | 96 | 2 | 98 |
| Nonferrous Metals | 19 | 81 | 17 | 83 | 44 | 56 |
| Electrical Machinery | 53 | 47 | 54 | 46 | 62 | 38 |
| Non-Electrical Machinery | 50 | 50 | 55 | 45 | 49 | 51 |
| Autos,Trucks & Parts | 14 | 86 | 15 | 85 | 13 | 87 |
| Aerospace | 31 | 69 | 36 | 64 | 34 | 66 |
| Fabricated Metals | 24 | 76 | 29 | 71 | 27 | 73 |
| Instruments | 28 | 72 | 28 | 72 | 25 | 75 |
| Stone,Clay & Glass | 18 | 82 | 26 | 74 | 14 | 86 |
| Other Durables | 50 | 50 | 49 | 51 | 49 | 51 |
| TOTAL DURABLES | 35 | 65 | 37 | 63 | 37 | 63 |
| Chemicals | 30 | 70 | 32 | 68 | 33 | 67 |
| Paper & Pulp | 53 | 47 | 52 | 48 | 55 | 45 |
| Rubber & Plastic | 19 | 81 | 22 | 78 | 22 | 78 |
| Petroleum | 32 | 68 | 35 | 65 | 32 | 68 |
| Food & Beverage | 27 | 73 | 24 | 76 | 23 | 77 |
| Textiles | 20 | 80 | 18 | 82 | 16 | 84 |
| Other Nondurables | 45 | 55 | 44 | 56 | 42 | 58 |
| TOTAL NONDURABLES | 34 | 66 | 35 | 65 | 34 | 66 |
| ALL MANUFACTURING | 35 | 65 | 36 | 64 | 35 | 65 |
| Mining | 12 | 88 | 11 | 89 | 10 | 90 |

TABLE III
BUILDINGS, MOTOR VEHICLES, AND OTHER MACHINERY & EQUIPMENT
(Percent of Capital Spending)

| INDUSTRY | ACTUAL 1984 | | | PLANNED 1985 | | | PLANNED 1986 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Buildings | Motor Vehicles | Machinery/ Equipment | Buildings | Motor Vehicles | Machinery/ Equipment | Buildings | Motor Vehicles | Machinery/ Equipment |
| Iron & Steel | 14 | 1 | 85 | 6 | 1 | 89 | 7 | 1 | 89 |
| Nonferrous Metals | 19 | 0 | 81 | 10 | 1 | 89 | 27 | 1 | 72 |
| Electrical Machinery | 21 | 5 | 74 | 21 | 3 | 75 | 22 | 3 | 75 |
| Non-Electrical Machinery | 23 | 4 | 73 | 22 | 4 | 74 | 22 | 4 | 74 |
| Autos,Trucks & Parts | 13 | 0 | 86 | 13 | 0 | 86 | 14 | 0 | 86 |
| Aerospace | 27 | 1 | 71 | 28 | 1 | 71 | 27 | 1 | 72 |
| Fabricated Metals | 21 | 2 | 77 | 21 | 2 | 76 | 15 | 2 | 82 |
| Instruments | 19 | 5 | 76 | 19 | 6 | 75 | 17 | 6 | 77 |
| Stone,Clay & Glass | 9 | 4 | 87 | 8 | 4 | 88 | 8 | 3 | 89 |
| Other Durables | 12 | 4 | 84 | 8 | 5 | 87 | 7 | 4 | 89 |
| TOTAL DURABLES | 19 | 3 | 78 | 17 | 3 | 80 | 18 | 3 | 79 |
| Chemicals | 14 | 2 | 84 | 14 | 2 | 85 | 14 | 2 | 84 |
| Paper & Pulp | 8 | 1 | 91 | 10 | 1 | 90 | 9 | 1 | 91 |
| Rubber & Plastic | 11 | 0 | 89 | 11 | 0 | 89 | 10 | 0 | 90 |
| Petroleum | 7 | 1 | 92 | 7 | 1 | 91 | 2 | 1 | 97 |
| Food & Beverage | 22 | 8 | 71 | 15 | 4 | 81 | 15 | 4 | 81 |
| Textiles | 7 | 3 | 90 | 10 | 3 | 87 | 6 | 3 | 89 |
| Other Nondurables | 9 | 4 | 87 | 20 | 3 | 77 | 9 | 7 | 82 |
| TOTAL NONDURABLES | 11 | 2 | 87 | 12 | 2 | 86 | 8 | 3 | 89 |
| ALL MANUFACTURING | 14 | 3 | 83 | 15 | 2 | 83 | 13 | 3 | 84 |
| Mining | 20 | 5 | 75 | 10 | 16 | 74 | 8 | 1 | 91 |
| Railroads | 5 | 1 | 94 | 5 | 1 | 94 | 5 | 1 | 94 |
| Airlines | 18 | 2 | 80 | 12 | 0 | 87 | 50 | 1 | 49 |
| Electric Utilities | 19 | 1 | 80 | 20 | 1 | 79 | 20 | 1 | 79 |
| Gas Utilities | 16 | 1 | 83 | 14 | 2 | 85 | 1 | 2 | 77 |
| Communication & Other | 13 | 21 | 65 | 13 | 21 | 67 | 6 | 31 | 63 |
| Trade & Services | 42 | 6 | 52 | 41 | 5 | 54 | 38 | 4 | 57 |
| ALL NONMANUFACTURING | 29 | 7 | 65 | 28 | 7 | 65 | 25 | 8 | 67 |
| ALL BUSINESS | 23 | 5 | 72 | 23 | 5 | 72 | 20 | 6 | 74 |

TABLE IV

CAPACITY EXPANSION
(Index, 1967=100)

| INDUSTRY | 1984 | 1985 | 1986 | Percent Change 1983-84 | Percent Change 1984-85 | Percent Change 1985-86 |
|---|---|---|---|---|---|---|
| Iron & Steel | 109 | 107 | 107 | -9.3 | -1.8 | 0.3 |
| Nonferrous Metals | 134 | 138 | 163 | -7.0 | 2.7 | 18.7 |
| Electrical Machinery | 290 | 308 | 333 | 8.3 | 6.0 | 8.3 |
| Non-Electrical Machinery | 222 | 237 | 256 | 5.3 | 6.7 | 8.0 |
| Autos,Trucks & Parts | 160 | 165 | 157 | 5.3 | 3.2 | -5.0 |
| Other Transportation | 207 | 220 | 243 | 7.8 | 6.2 | 10.4 |
| Fabricated Metals | 261 | 281 | 302 | 7.4 | 7.6 | 7.6 |
| Stone,Clay & Glass | 192 | 203 | 204 | 3.3 | 5.8 | 0.4 |
| Miscellaneous Manufacturing | 185 | 190 | 195 | 3.1 | 3.0 | 2.7 |
| Chemicals | 245 | 250 | 262 | 1.9 | 1.9 | 4.8 |
| Paper & Pulp | 192 | 196 | 204 | 4.2 | 2.2 | 4.2 |
| Rubber & Plastic | 181 | 183 | 186 | 4.2 | 1.2 | 1.3 |
| Petroleum | 140 | 140 | 140 | 0.0 | 0.0 | 0.0 |
| Food & Beverage | 273 | 291 | 307 | 5.7 | 6.5 | 5.6 |
| Textiles | 210 | 214 | 218 | 2.2 | 2.3 | 1.5 |
| ALL MANUFACTURING | 216 | 226 | 238 | 4.5 | 4.7 | 5.4 |
| Gas & Electric Utilities | 221 | 225 | 231 | 1.6 | 1.7 | 2.4 |

TABLE V

CAPACITY - RATES OF OPERATION
(Percent)

| INDUSTRY | YEAREND 1983 | YEAREND 1984 | POINT DIFFERENCE 1983-84 | PREFERRED RATE OF OPERATION |
|---|---|---|---|---|
| Iron & Steel | 54.3 | 61.9 | 7.6 | 93.8 |
| Nonferrous Metals | 94.7 | 87.3 | -7.4 | 94.8 |
| Electrical Machinery | 76.1 | 76.0 | -0.1 | 87.5 |
| Non-Electrical Machinery | 72.1 | 81.3 | 9.2 | 88.2 |
| Autos,Trucks & Parts | 84.3 | 80.9 | -3.4 | 97.5 |
| Aerospace | 87.8 | 85.3 | -2.5 | 92.8 |
| Fabricated Metals | 71.3 | 79.6 | 8.3 | 92.0 |
| Instruments | 82.1 | 84.9 | 2.8 | 91.5 |
| Stone,Clay & Glass | 72.9 | 79.2 | 6.3 | 92.0 |
| Other Durables | 76.9 | 67.5 | -9.4 | 83.4 |
| TOTAL DURABLES | 77.0 | 75.9 | -1.1 | 82.7 |
| Chemicals | 73.1 | 77.1 | 4.0 | 83.6 |
| Paper & Pulp | 91.0 | 92.0 | 1.0 | 96.0 |
| Rubber & Plastic | 85.1 | 92.4 | 7.3 | 90.6 |
| Petroleum | 73.0 | 81.1 | 8.1 | 96.2 |
| Food & Beverage | 81.4 | 75.5 | -5.9 | 92.1 |
| Textiles | 83.8 | 80.1 | -3.7 | 94.9 |
| Other Nondurables | 90.2 | 79.8 | -10.4 | 93.5 |
| TOTAL NONDURABLES | 78.5 | 75.4 | -3.1 | 81.5 |
| ALL MANUFACTURING | 77.8 | 74.7 | -3.1 | 80.0 |
| Mining | 73.4 | NC | NC | NC |
| Electric Utilities | 71.2 | 68.0 | -3.2 | 18.0 |
| Gas Utilities | 85.9 | 78.1 | -7.8 | 97.1 |

TABLE VI

SALES EXPECTATIONS
(Billions of Dollars)

| INDUSTRY | 1984 ACTUAL | 1985 EXPECTED | 1984-85 % CHANGE |
|---|---|---|---|
| Iron & Steel | 53.8 | 59.3 | 10.2 |
| Nonferrous Metals | 62.3 | 65.0 | 4.4 |
| Electrical Machinery | 182.3 | 196.6 | 7.9 |
| Non-Electrical Machinery | 209.6 | 233.8 | 11.6 |
| Autos,Trucks & Parts | 192.3 | 204.1 | 6.2 |
| Aerospace | 76.8 | 93.2 | 21.3 |
| Fabricated Metals | 139.2 | 153.2 | 10.0 |
| Instruments | 53.5 | 58.1 | 8.6 |
| Stone,Clay & Glass | 55.0 | 59.6 | 8.4 |
| Other Durables | 132.5 | 147.6 | 11.4 |
| TOTAL DURABLES | 1,181.4 | 1,270.6 | 7.6 |
| Chemicals | 211.8 | 226.6 | 7.0 |
| Paper & Pulp | 95.9 | 104.9 | 9.4 |
| Rubber & Plastic | 52.2 | 55.6 | 6.6 |
| Petroleum | 200.7 | 203.0 | 1.2 |
| Food & Beverage | 295.1 | 311.0 | 5.4 |
| Textiles | 55.1 | 58.1 | 5.4 |
| Other Nondurables | 182.3 | 195.7 | 7.4 |
| TOTAL NONDURABLES | 1,092.9 | 1,155.0 | 5.7 |
| ALL MANUFACTURING | 2,274.9 | 2,425.6 | 6.6 |
| Mining | NA | NA | 3.8 |
| Railroads | NA | NA | 4.2 |
| Airlines | NA | NA | 8.9 |
| Electric Utilities | NA | NA | 5.6 |
| Gas Utilities | NA | NA | 1.6 |
| Communication & Other | NA | NA | 9.6 |
| Trade & Services | NA | NA | 11.7 |

TABLE VII

REAL SALES EXPECTATIONS
(Billions of 1984 Dollars)

| INDUSTRY | 1984 ACTUAL | 1985 EXPECTED | 1984-85 % CHANGE |
|---|---|---|---|
| Iron & Steel | 53.8 | 58.0 | 7.8 |
| Nonferrous Metals | 62.3 | 64.0 | 2.7 |
| Electrical Machinery | 182.3 | 190.2 | 4.4 |
| Non-Electrical Machinery | 209.6 | 227.4 | 8.5 |
| Autos,Trucks & Parts | 192.3 | 199.2 | 3.6 |
| Aerospace | 76.8 | 89.6 | 16.7 |
| Fabricated Metals | 139.2 | 148.0 | 6.3 |
| Instruments | 53.5 | 56.7 | 5.9 |
| Stone,Clay & Glass | 55.0 | 58.0 | 5.4 |
| Other Durables | 132.5 | 142.0 | 7.1 |
| TOTAL DURABLES | 1,181.4 | 1,233.0 | 4.4 |
| Chemicals | 211.8 | 219.5 | 3.6 |
| Paper & Pulp | 95.9 | 101.1 | 5.4 |
| Rubber & Plastic | 52.2 | 53.4 | 2.3 |
| Petroleum | 200.7 | 200.9 | 0.1 |
| Food & Beverage | 295.1 | 305.8 | 3.6 |
| Textiles | 55.1 | 56.1 | 1.8 |
| Other Nondurables | 182.3 | 189.6 | 4.0 |
| TOTAL NONDURABLES | 1,092.9 | 1,126.4 | 3.1 |
| ALL MANUFACTURING | 2,274.9 | 2,359.4 | 3.7 |
| Mining | NA | NA | 1.7 |
| Railroads | NA | NA | 0.9 |
| Airlines | NA | NA | 9.0 |
| Electric Utilities | NA | NA | 0.2 |
| Gas Utilities | NA | NA | -1.5 |
| Communication & Other | NA | NA | 4.0 |
| Trade & Services | NA | NA | 7.6 |

TABLE VIII

INFLATION EXPECTATIONS
(Percentage Change)

| INDUSTRY | Expected % Change, 1983-84 | |
|---|---|---|
| | Plant & Equipment Prices | Product Prices |
| Iron & Steel | 4.8 | 2.2 |
| Nonferrous Metals | 0.6 | 1.6 |
| Electrical Machinery | 3.4 | 3.4 |
| Non-Electrical Machinery | 4.1 | 2.8 |
| Autos,Trucks & Parts | 4.3 | 2.5 |
| Aerospace | 4.7 | 4.0 |
| Fabricated Metals | 4.4 | 3.5 |
| Instruments | 4.5 | 2.5 |
| Stone,Clay & Glass | 4.4 | 2.9 |
| Other Durables | 5.8 | 4.0 |
| TOTAL DURABLES | 4.1 | 3.0 |
| Chemicals | 4.3 | 3.3 |
| Paper & Pulp | 5.0 | 3.8 |
| Rubber & Plastic | 4.8 | 4.2 |
| Petroleum | 4.1 | 1.0 |
| Food & Beverage | 4.4 | 1.7 |
| Textiles | 4.4 | 3.5 |
| Other Nondurables | 5.7 | 3.2 |
| TOTAL NONDURABLES | 4.5 | 2.5 |
| ALL MANUFACTURING | 4.3 | 2.8 |
| Mining | 4.4 | 2.2 |
| Railroads | 5.2 | 3.2 |
| Airlines | 6.2 | -0.1 |
| Electric Utilities | 6.0 | 5.3 |
| Gas Utilities | 4.9 | 3.1 |
| Communication & Other | 5.1 | 5.4 |
| Trade & Services | 5.8 | 3.8 |
| ALL NONMANUFACTURING | 5.6 | 4.1 |
| ALL BUSINESS | 5.1 | 3.6 |

TABLE IX

SURVEY SAMPLE SIZE

| Industry | Percentage of Capital Spending Covered by Survey |
|---|---|
| Iron & Steel | 15.6 |
| Nonferrous Metals | 31.5 |
| Electrical Machinery | 57.9 |
| Non-Electrical Machinery | 36.9 |
| Autos,Trucks & Parts | 81.6 |
| Aerospace | 69.6 |
| Fabricated Metals | 6.1 |
| Instruments | 66.9 |
| Stone,Clay & Glass | 9.4 |
| Other Durables | 3.4 |
| TOTAL DURABLES | 45.1 |
| Chemicals | 44.4 |
| Paper & Pulp | 30.7 |
| Rubber & Plastic | 14.7 |
| Petroleum | 59.8 |
| Food & Beverage | 14.0 |
| Textiles | 8.0 |
| Other Nondurables | 2.7 |
| TOTAL NONDURABLES | 36.4 |
| ALL MANUFACTURING | 40.5 |
| Mining | 6.8 |
| Railroads | 36.1 |
| Airlines | 25.6 |
| Electric Utilities | 50.7 |
| Gas Utilities | 13.2 |
| Communication & Other | 27.0 |
| Trade & Services | 4.4 |
| ALL NONMANUFACTURING | 17.8 |
| ALL BUSINESS | 26.7 |

TABLE X

CAPITAL SPENDING PLANS OF THE PETROLEUM INDUSTRY
(Millions of Dollars)

| FUNCTION | 1984 ACTUAL | 1984-85 % CHANGE | 1985 ESTIMATE | 1986 PLANNED | 1985-86 % CHANGE | 1987 PLANNED | 1986-87 % CHANGE | 1988 PLANNED | 1987-88 % CHANGE |
|---|---|---|---|---|---|---|---|---|---|
| Exploration and Production | 29,319 | 10.5 | 32,402 | 37,575 | 16.0 | 38,682 | 2.9 | 42,781 | 10.6 |
| Transportation (1) | 3,504 | 59.6 | 5,594 | 6,077 | 8.6 | 6,958 | 14.5 | 4,960 | -28.7 |
| Refining | 3,031 | -4.3 | 2,901 | 2,937 | 1.2 | 4,651 | 58.4 | 6,044 | 30.0 |
| Petrochemicals | 632 | 56.8 | 991 | 1,758 | 77.3 | 1,790 | 1.8 | 1,938 | 8.3 |
| Marketing | 3,060 | 33.7 | 4,091 | 3,853 | -5.8 | 3,721 | -3.4 | 3,840 | 3.2 |
| Other (2) | 4,263 | 19.9 | 5,109 | 4,656 | -8.9 | 4,529 | -2.7 | 4,385 | -3.2 |
| TOTAL | 43,809 | 16.6 | 51,088 | 56,856 | 11.3 | 60,331 | 6.1 | 63,948 | 6.0 |

Notes:
(1) Includes oil pipelines; does not include gas pipeline.
(2) Includes coal mining.

TABLE XI

CAPITAL SPENDING PLANS OF THE MINING INDUSTRY
(Millions of Dollars)

| INDUSTRY | 1984 ACTUAL | 1984-85 % CHANGE | 1985 ESTIMATE | 1986 PLANNED | 1985-86 % CHANGE | 1987 PLANNED | 1986-87 % CHANGE | 1988 PLANNED | 1987-88 % CHANGE |
|---|---|---|---|---|---|---|---|---|---|
| Coal | 5,018 | -1 | 4,980 | 4,739 | -4.8 | 5,376 | 13.4 | 4,702 | -12.5 |
| Iron Ore | 114 | -52 | 54 | 478 | 780.0 | 682 | 42.9 | 682 | 0.0 |
| Nonferrous | 2,002 | 16 | 2,319 | 3,172 | 36.8 | 1,503 | -52.6 | 1,524 | 1.4 |
| Nonmetallic | 1,175 | 131 | 2,711 | 2,519 | -7.1 | 2,754 | 9.3 | 2,740 | -0.5 |
| MINING INDUSTRY | 8,309 | 21 | 10,064 | 10,908 | 8.4 | 10,315 | -5.4 | 9,648 | -6.5 |

TABLE XII

CAPITAL SPENDING IN THE CHEMICAL PROCESS INDUSTRY
(BILLIONS OF DOLLARS)

| INDUSTRY | 1984 ACTUAL | 1985 ESTIMATED | 1986 PLANNED | 1987 PLANNED | 1988 PLANNED |
|---|---|---|---|---|---|
| CHEMICALS | 15.30 | 16.93 | 17.38 | 18.05 | 18.60 |
| PETROCHEMICALS | 0.63 | 0.99 | 1.76 | 1.79 | 1.94 |
| PAPER & PULP | 7.15 | 7.59 | 9.09 | 8.34 | 7.85 |
| RUBBER & PLASTICS | 3.10 | 3.43 | 3.76 | 3.98 | 4.33 |
| STONE,CLAY & GLASS | 3.09 | 3.58 | 3.60 | 3.43 | 3.28 |
| PETROLEUM REFINING | 3.03 | 2.90 | 2.94 | 4.65 | 6.04 |
| NONFERROUS METALS | 2.13 | 2.28 | 2.48 | 2.00 | 2.06 |
| COAL PRODUCTS | 0.73 | 0.72 | 0.69 | 0.78 | 0.68 |
| FOOD & BEVERAGES | 2.38 | 2.87 | 2.85 | 2.87 | 3.00 |
| TEXTILES | 0.38 | 0.37 | 0.35 | 0.39 | 0.39 |
| OTHER CPI | 1.24 | 1.57 | 1.06 | 0.68 | 0.76 |
| TOTAL CPI | 39.16 | 43.23 | 45.96 | 46.95 | 48.94 |

COMPONENTS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

TABLE XIII

CAPITAL SPENDING PLANS FOR THE ENERGY INDUSTRIES
(MILLIONS OF DOLLARS)

| INDUSTRY | 1984 ACTUAL | 1985 ESTIMATED | 1986 PLANNED | 1987 PLANNED | 1988 PLANNED |
|---|---|---|---|---|---|
| COAL MINING* | 5,018 | 4,980 | 4,739 | 5,376 | 4,702 |
| ELECTRIC UTILITIES | 37,090 | 37,529 | 32,004 | 28,743 | 29,544 |
| GAS UTILITIES | 10,300 | 11,778 | 12,069 | 12,735 | 13,431 |
| PETROLEUM INDUSTRY | 43,809 | 51,088 | 56,856 | 60,331 | 63,948 |
| EXPLORATION & PRODUCTION | 29,319 | 32,402 | 37,575 | 38,682 | 42,781 |
| TRANSPORTATION | 3,504 | 5,594 | 6,077 | 6,958 | 4,960 |
| REFINING | 3,031 | 2,901 | 2,937 | 4,651 | 6,044 |
| PETROCHEMICALS | 632 | 991 | 1,758 | 1,790 | 1,938 |
| MARKETING | 3,060 | 4,091 | 3,853 | 3,721 | 3,840 |
| OTHER* | 4,263 | 5,109 | 4,656 | 4,529 | 4,385 |
| TOTAL ENERGY INDUSTRIES | 96,217 | 105,375 | 105,669 | 107,185 | 111,624 |
| TOTAL ALL INDUSTRY | 353,560 | 388,388 | 380,985 | 378,359 | 388,420 |
| % ENERGY INDUSTRY INVESTMENT OF TOTAL | 27.2 | 27.1 | 27.7 | 28.3 | 28.7 |

*THERE IS SOME DUPLICATION OF INVESTMENT IN OTHER PETROLEUM AND COAL MINING.

TABLE XIV

DETAILED INDUSTRY TPENT DATA
ITOM SPENDING SURVEY

| Industry | Capital Spending Plans-* Change | | |
|---|---|---|---|
| | 1984-85 | 1985-86 | 1986-87 |
| Oil & Gas Extraction | -27.0 | 7.3 | 0.5 |
| General Building Contractors | -9.7 | -6.3 | 0.0 |
| Heavy Construction Contractors | 112.9 | -33.2 | 35.3 |
| Meat Products | 4.9 | NA | NA |
| Preserved Fruits and Vegetables | 69.7 | -36.9 | -3.4 |
| Grain Mill Products | 42.2 | -41.0 | -11.2 |
| Sugar Products | 47.9 | 32.4 | -9.3 |
| Beverages | 25.0 | -40.0 | 20.0 |
| Tobacco | 64.6 | -59.5 | 18.8 |
| Apparel | 16.7 | -14.3 | -6.7 |
| Printing and Publishing | 19.0 | -25.1 | -49.8 |
| Leather | 19.9 | 3.5 | 9.6 |
| Knitting Mills | 23.3 | -16.2 | -9.7 |
| Lumber | -19.2 | -50.0 | 0.0 |
| Furniture | -14.8 | 5.7 | 28.6 |
| Industrial Inorganic Chemicals | 18.2 | 19.3 | -4.5 |
| Plastics Materials and Synthetics | 41.7 | -5.9 | 0.0 |
| Drugs | -6.3 | 4.2 | 13.4 |
| Soap, Cleaners, & Toilet Goods | -5.5 | 7.3 | 2.2 |
| Paints | 4.4 | 1.4 | -12.5 |
| Agricultural Chemicals | 129.8 | -38.0 | -7.8 |
| Misc. Chemicals | 21.0 | -24.0 | 45.7 |
| Products of Purchased Glass | 16.2 | -0.8 | -8.6 |
| Cement, Hydraulic | 15.2 | 21.7 | 0.4 |
| Structural Clay Products | -34.9 | -0.7 | 36.3 |
| Pottery | -2.1 | -20.3 | -28.6 |
| Concrete, Gypsum, Plaster | -25.0 | -33.3 | 0.0 |
| Misc. Nonmetallic Mineral Products | 32.0 | -12.9 | -7.3 |
| Primary Nonferrous Metals | 3.8 | 10.7 | 0.1 |
| Nonferrous Rolling and Drawing | 78.4 | -7.4 | -31.6 |

TABLE XIV (CONT.)

DETAILED INDUSTRY TREND DATA
FROM SPRING SURVEY

| Industry | Capital Spending Plans-% Change | | |
|---|---|---|---|
| | 1984-85 | 1985-86 | 1986-87 |
| Metal Cans | 9.4 | 12.4 | -2.2 |
| Cutlery, Hand Tools, Hardware | 27.6 | 12.2 | 10.9 |
| Plumbing and Heating Eq. | 100.0 | -50.0 | 50.0 |
| Fabricated Structural Metal | 6.5 | 16.0 | 3.4 |
| Screw Machine Products | 10.5 | -0.8 | 8.0 |
| Misc. Fabricated Metals | 3.5 | 4.6 | 3.2 |
| Engines and Turbines | 40.6 | -17.8 | 0.0 |
| Farm Equipment | 78.7 | -9.1 | -27.3 |
| Construction, Mining, Materials Handling Eq. | 16.9 | 30.3 | 19.9 |
| Metalworking Machinery | 93.7 | 5.5 | -18.0 |
| Special Industry Machinery | -31.6 | -63.9 | 23.3 |
| General Industrial Machinery | 26.6 | 1.8 | 15.4 |
| Office, Computing Machinery | 6.0 | 12.2 | 15.0 |
| Refrigeration and Service Industry Machinery | 4.0 | 4.4 | -5.2 |
| Electric Distributing Equipment | -21.9 | 4.7 | 0.1 |
| Electrical Industrial Apparatus | -11.4 | 6.3 | 11.0 |
| Household Appliances | 2.0 | -11.0 | -7.9 |
| Communication Equipment | 16.6 | 2.6 | -0.6 |
| Electronic Components | -1.0 | 9.4 | -13.9 |
| Misc. Electrical | -11.8 | 24.0 | -2.6 |
| Other Transportation Eq. | 5.0 | 4.8 | 6.1 |
| Engineering & Scientific Instruments | 21.9 | 13.2 | -4.0 |
| Optical Instruments and Lenses | -25.0 | 33.3 | 0.0 |
| Medical Instruments and Supplies | 8.3 | -8.2 | 1.4 |
| Miscellaneous Manufacturing | 25.6 | 6.8 | 1.7 |
| Trucking and Warehousing | 31.1 | -15.1 | 7.1 |
| Communications | 21.7 | -5.0 | -5.4 |
| Telephone Communications | 5.5 | 3.2 | 0.7 |

TABLE XIV (CONT.)

DETAILED INDUSTRY TREND DATA
FROM SPRING SURVEY

| Industry | Capital Spending Plans-% Change | | |
|---|---|---|---|
| | 1984-85 | 1985-86 | 1986-87 |
| Hardware, Plumbing Eq.--Whole | -12.6 | -11.8 | 6.3 |
| General Merchandise Stores | -4.1 | 4.1 | -4.2 |
| Department Stores | -50.0 | 100.0 | 0.0 |
| Food Stores | 9.9 | 6.1 | 9.7 |
| Retail and Whole. Trade | -4.3 | 2.4 | -2.2 |
| Insurance Carriers | 16.5 | -10.3 | -2.1 |
| Finance | 18.3 | -2.7 | 0.2 |
| Hotels and Motels | -1.1 | -26.9 | 0.9 |
| Business Services | 106.7 | -30.0 | -3.3 |
| Computer and Data Processing Services | -13.2 | 4.2 | 15.5 |
| Miscellaneous Business Services | 17.2 | 21.5 | -23.7 |
| Amusement & Recreation Services | -20.8 | 6.8 | 3.3 |
| Business & Personal Services | -1.1 | -19.6 | 1.9 |
| Hospitals | 25.8 | 14.9 | 14.8 |
| Educational Services | 27.7 | -2.9 | 23.5 |
| Miscellaneous Professional Services | 21.4 | -23.8 | -18.4 |
| Health Professional Services | 25.8 | 8.4 | 18.6 |

CONFIDENTIAL

No. M_____

MINING

1221 Avenue of the Americas
New York, NY 10020

## BUSINESS' PLANS FOR NEW PLANTS AND EQUIPMENT 1985-88
(All questions apply to U.S. only)

CAPITAL SPENDING

In your answers to the following questions, please include all purchases charged to capital accounts, whether for replacement, expansion, or other purposes. Please include the value of new plants and equipment leased to others, but not the value of new plants and equipment leased from others. Also, please do not include acquisitions.

1. How much did (will) your company invest (inflation included) in new plants and equipment in the U.S. in 1984-88, for manufacturing, nonferrous, and nonmetallic mining and other activities. Please include under nonmetallic mining all mineral processing. (If answers omit 000s or 000,000s, note:_____.)

| | 1984 | 1985 | 1986 | 1987 | 1988 |
|---|---|---|---|---|---|
| Manufacturing | $_____ | $_____ | $_____ | $_____ | $_____ |
| Nonferrous mining | $_____ | $_____ | $_____ | $_____ | $_____ |
| Nonmetallic mining | $_____ | $_____ | $_____ | $_____ | $_____ |
| Other (please specify) | $_____ | $_____ | $_____ | $_____ | $_____ |
| TOTAL | $_____ | $_____ | $_____ | $_____ | $_____ |

| | 1984 | 1985 | 1986 |
|---|---|---|---|
| 2. Of the total amount invested in new plants and equipment, what percent was (will be) for: | | | |
| Buildings | % | % | % |
| Machinery & Equipment | % | % | % |
| Motor Vehicles | % | % | % |
| | 100% | 100% | 100% |
| Of the total invested, what percent was (will be) for expansion? | % | % | % |
| Of the total invested, what percent was (will be) for employee safety & health? | % | % | % |
| Of the total invested, what percent was (will be) for: | | | |
| Air Pollution Control | % | % | % |
| Water Pollution Control | % | % | % |
| Solid Waste Pollution Control | % | % | % |
| 3. How much did (will) your company's capacity, measured in terms of physical volume, increase (decrease)? Please show yearend vs. yearend changes (yearend 1983 to yearend 1984 for the 1984 column, for example). | | | |
| Manufacturing | % | % | % |
| Mining | % | % | % |
| At the end of 1984, at what rate of capacity was your company operating? | | | |
| Manufacturing | % | | |
| Mining | % | | |
| What is your firm's preferred rate of operation? | % | | |

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No. N_____
NONFERROUS METALS

1221 Avenue of the Americas
New York, NY 10020

## BUSINESS' PLANS FOR NEW PLANTS AND EQUIPMENT 1985-88
(All questions apply to U.S. only)

### CAPITAL SPENDING

In your answers to the following questions, please include all purchases charged to capital accounts, whether for replacement, expansion, or other purposes. Please include the value of new plants and equipment leased to others, but not the value of new plants and equipment leased from others. Also, please do not include acquisitions.

1. How much did (will) your company invest (inflation included) in new plants and equipment in the U.S. in 1984-88, for manufacturing, nonferrous, coal, and nonmetallic mining and 'other' activities. Please include under mining all operations including smelting and refining. (If answers omit 000s or 000,000s, note:_____.)

| | 1984 | 1985 | 1986 | 1987 | 1988 |
|---|---|---|---|---|---|
| Manufacturing | $_____ | $_____ | $_____ | $_____ | $_____ |
| Nonferrous mining | $_____ | $_____ | $_____ | $_____ | $_____ |
| Coal Mininig | $_____ | $_____ | $_____ | $_____ | $_____ |
| Nonmetallic Mining | $_____ | $_____ | $_____ | $_____ | $_____ |
| Other (please specify) | $_____ | $_____ | $_____ | $_____ | $_____ |
| TOTAL | $_____ | $_____ | $_____ | $_____ | $_____ |

| | 1984 | 1985 | 1986 |
|---|---|---|---|
| 2. Of the total amount invested in new plants and equipment, what percent was (will be) for: | | | |
| Buildings | % | % | % |
| Machinery & Equipment | % | % | % |
| Motor Vehicles | % | % | % |
| | 100% | 100% | 100% |
| Of the total invested, what percent was (will be) for expansion? | % | % | % |
| Of the total invested, what percent was (will be) for employee safety & health? | % | % | % |
| Of the total invested, what percent was (will be) for: | | | |
| Air Pollution Control | % | % | % |
| Water Pollution Control | % | % | % |
| Solid Waste Pollution Control | % | % | % |
| 3. How much did (will) your company's capacity, measured in terms of physical volume, increase (decrease)? Please show yearend vs. yearend changes (yearend 1983 to yearend 1984 for the 1984 column, for example). | | | |
| Manufacturing | % | % | % |
| Metal mining | % | % | % |
| Coal Mining | % | % | % |
| At the end of 1984, at what rate of capacity was your company operating? | | | |
| Manufacturing | % | | |
| Metal mining | % | | |
| Coal Mining | % | | |
| What is your firm's preferred rate of operation? | % | | |

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No. A_____

MOTOR VEHICLES

1221 Avenue of the Americas
New York, NY 10020

## BUSINESS' PLANS FOR NEW PLANTS AND EQUIPMENT 1985-88

(All questions apply to U.S. only)

### CAPITAL SPENDING

In your answers to the following questions, please include all purchases charged to capital accounts, whether for replacement, expansion, or other purposes. Please include the value of new plants and equipment leased to others, but not the value of new plants and equipment leased from others. Also, please do not include acquisitions.

1. How much did your company invest in new plants and equipment (including special tooling) in the U.S. in 1984, and how much does it plan to invest (inflation included) in 1985-88? (If answers omit 000s or 000,000s, note:_____.)

| 1984 | 1985 | 1986 | 1987 | 1988 |
|---|---|---|---|---|
| $ | $ | $ | $ | $ |

2. Of the total amount invested in new plants and equipment, what percent was (will be) for:

| | 1984 | 1985 | 1986 |
|---|---|---|---|
| Buildings | % | % | % |
| Machinery & Equipment | % | % | % |
| Motor Vehicles | % | % | % |
| | 100% | 100% | 100% |
| Of the total invested, what percent was (will be) for expansion? | % | % | % |
| Of the total invested, what percent was (will be) for employee safety & health? | % | % | % |
| Of the total invested, what percent was (will be) for: | | | |
| Air Pollution Control | % | % | % |
| Water Pollution Control | % | % | % |
| Solid Waste Pollution Control | % | % | % |

3. How much did (will) your company's capacity, measured in terms of physical volume, increase (decrease)? Please show yearend vs. yearend changes (yearend 1983 to yearend 1984 for the 1984 column, for example).

| | | | |
|---|---|---|---|
| | % | % | % |
| At the end of 1984, at what rate of capacity was your company operating? | % | | |
| What is your firm's preferred rate of operation? | % | | |

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No. IC_____

IRON & STEEL

1221 Avenue of the Americas
New York, NY 10020

## BUSINESS' PLANS FOR NEW PLANTS AND EQUIPMENT 1985-88

(All questions apply to U.S. only)

CAPITAL SPENDING

In your answers to the following questions, please include all purchases charged to capital accounts, whether for replacement, expansion, or other purposes. Please include the value of new plants and equipment leased to others, but not the value of new plants and equipment leased from others. Also, please do not include acquisitions.

1. How much did (will) your company invest (inflation included) in new plants and equipment in the U.S. in 1984-88, in manufacturing, iron, coal, and metallic mining and 'other' activities. Please include under mining all operations including smelting and refining. (If answers omit 000s or 000,000s, note:_____.)

| | 1984 | 1985 | 1986 | 1987 | 1988 |
|---|---|---|---|---|---|
| Manufacturing | $_____ | $_____ | $_____ | $_____ | $_____ |
| Iron mining | $_____ | $_____ | $_____ | $_____ | $_____ |
| Coal Mininig | $_____ | $_____ | $_____ | $_____ | $_____ |
| Nonmetallic Mining | $_____ | $_____ | $_____ | $_____ | $_____ |
| Other (please specify) | $_____ | $_____ | $_____ | $_____ | $_____ |
| TOTAL | $_____ | $_____ | $_____ | $_____ | $_____ |

2. Of the total amount invested in new plants and equipment, what percent was (will be) for:

| | 1984 | 1985 | 1986 |
|---|---|---|---|
| Buildings | % | % | % |
| Machinery & Equipment | % | % | % |
| Motor Vehicles | % | % | % |
| | 100% | 100% | 100% |
| Of the total invested, what percent was (will be) for expansion? | % | % | % |
| Of the total invested, what percent was (will be) for employee safety & health? | % | % | % |
| Of the total invested, what percent was (will be) for: | | | |
| Air Pollution Control | % | % | % |
| Water Pollution Control | % | % | % |
| Solid Waste Pollution Control | % | % | % |

3. How much did (will) your company's capacity, measured in terms of physical volume, increase (decrease)? Please show yearend vs. yearend changes (yearend 1983 to yearend 1984 for the 1984 column, for example).

| | | | |
|---|---|---|---|
| Manufacturing | % | % | % |
| Metal mining | % | % | % |
| Coal Mining | % | % | % |
| At the end of 1984, at what rate of capacity was your company operating? | | | |
| Manufacturing | % | | |
| Metal mining | % | | |
| Coal Mining | % | | |
| What is your firm's preferred rate of operation? | % | | |

CONFIDENTIAL

No. GU_____
GAS UTILITIES

1221 Avenue of the Americas
New York, NY 10020

BUSINESS' PLANS FOR NEW PLANTS AND EQUIPMENT 1985-88
(All questions apply to U.S. only)

CAPITAL SPENDING

In your answers to the following questions, please include all purchases charged to capital accounts, whether for replacement, expansion, or other purposes. Please include the value of new plants and equipment leased to others, but not the value of new plants and equipment leased from others. Also, please do not include acquisitions.

1. How much did your company invest in new plants and equipment in the U.S. in 1984, and how much does it plan to invest (inflation included) in 1985-88? (If answers omit 000s or 000,000s, note:_____.)

| 1984 | 1985 | 1986 | 1987 | 1988 |
|---|---|---|---|---|
| $ | $ | $ | $ | $ |

2. Of the total amount invested in new plants and equipment, what percent was (will be) for:

| | 1984 | 1985 | 1986 |
|---|---|---|---|
| Buildings | % | % | % |
| Machinery & Equipment | % | % | % |
| Motor Vehicles | % | % | % |
| | 100% | 100% | 100% |
| Of the total invested, what percent was (will be) for employee safety & health? | % | % | % |
| Of the total invested, what percent was (will be) for: | | | |
| Air Pollution Control | % | % | % |
| Water Pollution Control | % | % | % |
| Solid Waste Pollution Control | % | % | % |

3. How much did (will) your company increase (decrease) its system's capacity? Please show yearend vs. yearend changes (yearend 1983 to yearend 1984 for the 1984 column, for example).

| | | | |
|---|---|---|---|
| | % | % | % |
| What percent of your system's maximum capacity were you utilizing for the December 1984 max day? | % | | |
| What is your firm's preferred rate of operation? | % | | |

CONFIDENTIAL

No. P_____
PETROLEUM

1221 Avenue of the Americas
New York, NY 10020

## BUSINESS' PLANS FOR NEW PLANTS AND EQUIPMENT 1985-88
(All questions apply to U.S. only)

### CAPITAL SPENDING

In your answers to the following questions, please include all purchases charged to capital accounts, whether for replacement, expansion, or other purposes. Please include the value of new plants and equipment leased to others, but not the value of new plants and equipment leased from others. Also, please do not include acquisitions.

1. How much did (will) your company invest (inflation included) in new plants and equipment in the U.S. in 1984-88, and what was (will be) the distribution among the following: (If answers omit 000s or 000,000s, note:_____.)

| | 1984 | 1985 | 1986 | 1987 | 1988 |
|---|---|---|---|---|---|
| Production/Exploration | $_____ | $_____ | $_____ | $_____ | $_____ |
| Refining | $_____ | $_____ | $_____ | $_____ | $_____ |
| Petrochemicals | $_____ | $_____ | $_____ | $_____ | $_____ |
| Transportation | $_____ | $_____ | $_____ | $_____ | $_____ |
| Marketing | $_____ | $_____ | $_____ | $_____ | $_____ |
| Coal Mining | $_____ | $_____ | $_____ | $_____ | $_____ |
| Other (please specify) | $_____ | $_____ | $_____ | $_____ | $_____ |
| TOTAL | $_____ | $_____ | $_____ | $_____ | $_____ |

2. Of the total amount invested in new plants and equipment, what percent was (will be) for:

| | 1984 | 1985 | 1986 |
|---|---|---|---|
| Buildings | % | % | % |
| Machinery & Equipment | % | % | % |
| Motor Vehicles | % | % | % |
| | 100% | 100% | 100% |
| Of the total invested, what percent was (will be) for expansion? | % | % | % |
| Of the total invested, what percent was (will be) for employee safety & health? | % | % | % |
| Of the total invested, what percent was (will be) for: | | | |
| Air Pollution Control | % | % | % |
| Water Pollution Control | % | % | % |
| Solid Waste Pollution Control | % | % | % |

3. How much did (will) your company's capacity, measured in terms of physical volume, increase (decrease)? Please show yearend vs. yearend changes (yearend 1983 to yearend 1984 for the 1984 column, for example).

| | | | |
|---|---|---|---|
| Refining | % | % | % |
| Coal Mining | % | % | % |
| At the end of 1984, at what rate of capacity was your company operating? | | | |
| Refining | % | | |
| Coal Mining | % | | |
| What is your firm's preferred rate of operation? | % | | |

CONFIDENTIAL

No. RR_____

RAILROADS

1221 Avenue of the Americas
New York, NY 10020

## BUSINESS' PLANS FOR NEW PLANTS AND EQUIPMENT 1985-88

(All questions apply to U.S. only)

### CAPITAL SPENDING

In your answers to the following questions, please include all purchases charged to capital accounts, whether for replacement, expansion, or other purposes. Please include the value of new plants and equipment leased to others, but not the value of new plants and equipment leased from others. Also, please do not include acquisitions.

1. How much did your company invest in rolling stock, roadway, structures and equipment in 1984, and how much does it plan to invest (inflation included) in 1985-88? (If answers omit 000s or 000,000s note:_____.)

| 1984 | 1985 | 1986 | 1987 | 1988 |
|---|---|---|---|---|
| $ | $ | $ | $ | $ |

2. Of the total amount invested in new plants and equipment, what percent was (will be) for:

| | 1984 | 1985 | 1986 |
|---|---|---|---|
| Buildings | % | % | % |
| Machinery & Equipment | % | % | % |
| Motor Vehicles | % | % | % |
| | 100% | 100% | 100% |
| Of the total invested, what percent was (will be) for employee safety & health? | % | % | % |
| Of the total invested, what percent was (will be) for: | | | |
| Air Pollution Control | % | % | % |
| Water Pollution Control | % | % | % |
| Solid Waste Pollution Control | % | % | % |

CONFIDENTIAL

No. S_____

TRADE & SERVICES
& "SHORT" FORM

1221 Avenue of the Americas
New York, NY 10020

## BUSINESS' PLANS FOR NEW PLANTS AND EQUIPMENT 1985-88

(All questions apply to U.S. only)

CAPITAL SPENDING

In your answers to the following questions, please include all purchases charged to capital accounts, whether for replacement, expansion, or other purposes. Please include the value of new plants and equipment leased to others, but not the value of new plants and equipment leased from others. Also, please do not include acquisitions.

1. How much did your company invest in new plants and equipment in the U.S. in 1984, and how much does it plan to invest (inflation included) in 1985-88? (If answers omit 000s or 000,000s, note:_____.)

| 1984 | 1985 | 1986 | 1987 | 1988 |
|---|---|---|---|---|
| $ | $ | $ | $ | $ |

2. Of the total amount invested in new plants and equipment, what percent was (will be) for:

| | 1984 | 1985 | 1986 |
|---|---|---|---|
| Buildings | % | % | % |
| Machinery & Equipment | % | % | % |
| Motor Vehicles | % | % | % |
| | 100% | 100% | 100% |
| Of the total invested, what percent was (will be) for employee safety & health? | % | % | % |
| Of the total invested, what percent was (will be) for: | | | |
| Air Pollution Control | % | % | % |
| Water Pollution Control | % | % | % |
| Solid Waste Pollution Control | % | % | % |

SALES AND PRICES

1. What were your company's sales, including exports, in 1984? (Please omit 000s.)

$_____

2. By what percent do you think your sales will increase (decrease) between 1984-85?

_____ %

3. By what percent do you think the prices of goods and services your company sells will increase (decrease) between 1984-1985?

_____ %

4. By what percent do you expect the prices of plants and equipment your company buys to increase (decrease) between 1984-85?

_____ %

NAME_____ TITLE_____

COMPANY_____

ADDRESS_____

ALL YOUR ANSWERS WILL BE HELD STRICTLY CONFIDENTIAL
(Please return by March 31)

CONFIDENTIAL

No. G_____
GENERAL

1221 Avenue of the Americas
New York, NY 10020

## BUSINESS' PLANS FOR NEW PLANTS AND EQUIPMENT 1985-88
(All questions apply to U.S. only)

### CAPITAL SPENDING

In your answers to the following questions, please include all purchases charged to capital accounts, whether for replacement, expansion, or other purposes. Please include the value of new plants and equipment leased to others, but not the value of new plants and equipment leased from others. Also, please do not include acquisitions.

1. How much did your company invest in new plants and equipment in the U.S. in 1984, and how much does it plan to invest (inflation included) in 1985-88? (If answers omit 000s or 000,000s, note: _____.)

| 1984 | 1985 | 1986 | 1987 | 1988 |
|---|---|---|---|---|
| $ | $ | $ | $ | $ |

| | 1984 | 1985 | 1986 |
|---|---|---|---|
| 2. Of the total amount invested in new plants and equipment, what percent was (will be) for: | | | |
| Buildings | % | % | % |
| Machinery & Equipment | % | % | % |
| Motor Vehicles | % | % | % |
| | 100% | 100% | 100% |
| Of the total invested, what percent was (will be) for expansion? | % | % | % |
| Of the total invested, what percent was (will be) for employee safety & health? | % | % | % |
| Of the total invested, what percent was (will be) for: | | | |
| Air Pollution Control | % | % | % |
| Water Pollution Control | % | % | % |
| Solid Waste Pollution Control | % | % | % |
| 3. If your firm is in manufacturing or mining: | | | |
| How much did (will) your company's capacity, measured in terms of physical volume, increase (decrease)? Please show yearend vs. yearend changes (yearend 1983 to yearend 1984 for the 1984 column, for example). | % | % | % |
| At the end of 1984, at what rate of capacity was your company operating? | % | | |
| What is your firm's preferred rate of operation? | % | | |

CONFIDENTIAL

No. EU _____
ELECTRICAL UTILITIES

1221 Avenue of the Americas
New York, NY 10020

BUSINESS' PLANS FOR NEW PLANTS AND EQUIPMENT 1985-88
(All questions apply to U.S. only)

CAPITAL SPENDING

In your answers to the following questions, please include all purchases charged to capital accounts, whether for replacement, expansion, or other purposes. Please include the value of new plants and equipment leased to others, but not the value of new plants and equipment leased from others. Also, please do not include acquisitions.

1. How much did your company invest in new plants and equipment in the U.S. in 1984, and how much does it plan to invest (inflation included) in 1985-88? (If answers omit 000s or 000,000s, note: _____.)

| 1984 | 1985 | 1986 | 1987 | 1988 |
|---|---|---|---|---|
| $ | $ | $ | $ | $ |

| 2. Of the total amount invested in new plants and equipment, what percent was (will be) for: | 1984 | 1985 | 1986 |
|---|---|---|---|
| Buildings | % | % | % |
| Machinery & Equipment | % | % | % |
| Motor Vehicles | % | % | % |
| | 100% | 100% | 100% |
| Of the total invested, what percent was (will be) for employee safety & health? | % | % | % |
| Of the total invested, what percent was (will be) for: | | | |
| Air Pollution Control | % | % | % |
| Water Pollution Control | % | % | % |
| Solid Waste Pollution Control | % | % | % |
| 3. How much did (will) your company's generating capacity, increase (decrease)? Please show yearend vs. yearend changes (yearend 1983 to yearend 1984 for the 1984 column, for example). | % | % | % |
| What percent of your system's maximum generating capacity was reserve margin at: | | | |
| Summer Peak | % | | |
| Winter Peak | % | | |
| What is your firm's average preferred reserve margin? | % | | |

CONFIDENTIAL

No. CH_____
CHEMICALS

1221 Avenue of the Americas
New York, NY 10020

## BUSINESS' PLANS FOR NEW PLANTS AND EQUIPMENT 1985-88
(All questions apply to U.S. only)

### CAPITAL SPENDING

In your answers to the following questions, please include all purchases charged to capital accounts, whether for replacement, expansion, or other purposes. Please include the value of new plants and equipment leased to others, but not the value of new plants and equipment leased from others. Also, please do not include acquisitions. (If answers omit 000s or 000,000s, note:_____.)

1. How much did (will) your company invest (inflation included) in new plants and equipment in the U.S. in 1984-88 for manufacturing, nonmetallic mining, and other activities.

| | 1984 | 1985 | 1986 | 1987 | 1988 |
|---|---|---|---|---|---|
| Manufacturing | $_____ | $_____ | $_____ | $_____ | $_____ |
| Nonmetallic mining | $_____ | $_____ | $_____ | $_____ | $_____ |
| Other (please specify) | $_____ | $_____ | $_____ | $_____ | $_____ |
| TOTAL | $_____ | $_____ | $_____ | $_____ | $_____ |

| | 1984 | 1985 | 1986 |
|---|---|---|---|
| 2. Of the total amount invested in new plants and equipment, what percent was (will be) for: | | | |
| Buildings | % | % | % |
| Machinery & Equipment | % | % | % |
| Motor Vehicles | % | % | % |
| | 100% | 100% | 100% |
| Of the total invested, what percent was (will be) for expansion? | % | % | % |
| Of the total invested, what percent was (will be) for employee safety & health? | % | % | % |
| Of the total invested, what percent was (will be) for: | | | |
| Air Pollution Control | % | % | % |
| Water Pollution Control | % | % | % |
| Solid Waste Pollution Control | % | % | % |
| 3. How much did (will) your company's capacity, measured in terms of physical volume, increase (decrease)? Please show yearend vs. yearend changes (yearend 1983 to yearend 1984 for the 1984 column, for example). | % | % | % |
| At the end of 1984, at what rate of capacity was your company operating? | % | | |
| What is your firm's preferred rate of operation? | % | | |

SECOND PAGE FOR ALL QUESTIONNAIRES
EXCEPT "S" QUESTIONNAIRE

## RESEARCH AND DEVELOPMENT (R&D)

1. What was the cost of all R&D performed by your company in the U.S. in 1983 and 1984? (If answers omit 000s or 000,000s, note:_____.)

   1983 $_____

   1984 $_____

2. By what percent do you think your company's total R&D spending will increase (decrease) between 1984-85 and 1985-88?

| 1984-85 | 1985-88 |
|---|---|
| % | % |

## SALES AND PRICES

1. What were your company's sales, including exports, in 1984? (If answers omit 000s or 000,000s, note:_____.) $_____

2. By what percent do you think your sales will increase (decrease) between 1984-85? _____%

3. By what percent do you think the prices of goods and services your company sells will increase (decrease) between 1984-1985? _____%

4. By what percent do you expect the prices of plant and equipment your company buys to increase (decrease) between 1984-85? _____%

NAME_____ TITLE_____

COMPANY_____

ADDRESS_____

ALL YOUR ANSWERS WILL BE HELD STRICTLY CONFIDENTIAL
(Please return by March 31)